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ABSTRACT

Major findings and recommendations for postsecondary education in Indiana are presented. Topics discussed include enrollments, postsecondary participation rates, College Board admission test results, educational attainments of the Indiana adult population, characteristics and plans of Indiana high school seniors, characteristics and plans of college freshmen based essentially on national norms, and some relationships between higher education and the Indiana economy. The following recommendations are among many discussed: Postsecondary program/course information, applications, admissions, tutoring, counseling, and other services should be specially designed and provided on a continuing basis for those who have delayed continuing their education. Twelfth grade enrollments are declining; efforts should be made to decrease the high school dropout rate, decrease the number of good students who leave the state to study elsewhere, and increase the interest and motivation of academically qualified student to pursue college. It is recommended that the assumption be accepted that Indiana high school graduates are as capable academically as those from other states to continue their postsecondary studies successfully. Educational institutions and agencies should determine why Indiana's adult population is less well educated at the postsecondary levels than are adults in the Midwest and nationally. (CC)

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POSTSECONDARY EDUCATION IN INDIANA

A SUPPORT REPORT WITH RECOMMENDATIONS

PART FOUR OF A FOUR-PART STUDY

CONDUCTED FOR THE INDIANA CONFERENCE OF HIGHER EDUCATION

FUNDED BY ELI LILLY ENDOWMENT, INC.

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INDIANA CONFERENCE OF HIGHER EDUCATION
Steering Committee

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Rev. Charles Banet, President of Saint Joseph's College in Rensselaer,
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AND

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All errors remain the sole property of the author.

J. P. Lisack

J. P. Lisack, Professor of Technology and Director, Office of Manpower Studies

FOREWORD

POSTSECONDARY EDUCATION IN INDIANA
A SUMMARY REPORT WITH RECOMMENDATIONS

This report summarizes and provides recommendations concerning postsecondary education in Indiana. It is the concluding report of a four-part study (reports of each of the previous parts are identified below).

The first report contains data concerning past, present and future enrollments in Indiana high schools, colleges, and universities. It also contains the Indiana "college attendance rate," that is, the proportion of high school graduates who continue their education; comparisons are made between Indiana, other Midwestern states and National averages. College Board Scholastic Aptitude Test results are also reviewed in this first part. Finally, the levels of education attained by Indiana adults are compared with those of other states and National averages.[1/]

Part Two contains the characteristics, career choices, and the educational and employment plans of Indiana high school seniors in various classes from 1966 through 1980. Comparisons are made between ethnic groups and sex.[2/]

Part Three presents the characteristics and plans of first-year college students and compares Indiana freshmen and National norms for the Fall of 1980.[3/]

Part Four (this report) contains a summary of the previous studies supplemented with other related information; appropriate recommendations are also presented.

This entire series is designed to provide data and insights which will facilitate policy formulation, planning and implementation actions bearing on the improvement of postsecondary education in Indiana.

* * *

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THE INDIANA CONFERENCE OF HIGHER EDUCATION
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1/ *Manpower Report 80-2, "Postsecondary Education in Indiana: Enrollments and Educational Attainments."*

2/ *Manpower Report 81-1, "Characteristics and Plans of Indiana High School Seniors; Trends in the Characteristics, Career Choices, and the Educational and Employment Plans of Indiana High School Classes of 1966, 1969, 1972, 1975, and 1980 with Comparisons by Ethnic Group and Sex."*

3/ *Manpower Report 81-2, "Characteristics and Plans of First-Year College Students; A Comparison of Indiana Freshmen and National Norms for the Fall of 1980."*

TABLE OF CONTENTS

Page

CHAPTER I
INTRODUCTION AND DESCRIPTION OF THIS REPORT

1. BACKGROUND 1
2. PURPOSES 1
3. SUPPORT 2
4. THE FOUR REPORTS 2
5. FORMAT AND DESCRIPTION OF THIS REPORT 3

CHAPTER II
ENROLLMENTS AND EDUCATIONAL ATTAINMENTS

FINDING 1 NEW ENROLLEES 5
Recommendation 5
FINDING 2 COLLEGE ATTENDANCE RATES AND EDUCATIONAL LEVEL ACHIEVEMENTS 5
Recommendation 6
FINDING 3 PROJECTED ENROLLMENTS 6
3A INDIANA HIGH SCHOOLS 6
Recommendation 7
3B COLLEGES AND UNIVERSITIES IN INDIANA 7
Recommendation 8
FINDING 4 COLLEGE ADMISSIONS TESTING PROGRAMS 8
Recommendation 9

CHAPTER III
CHARACTERISTICS AND PLANS OF INDIANA HIGH SCHOOL SENIORS

CHARACTERISTICS

FINDING 1 SEX DISTRIBUTION 10
Recommendation 10
FINDING 2 RACE 10
Census Data Note 10
FINDING 3 HIGH SCHOOL TYPE PROGRAM ENROLLED IN 11
Recommendation and Note 11
FINDING 4 HIGH SCHOOL GRADE AVERAGE 12
Recommendation 12
FINDING 5 CHARACTERISTICS - HEAD OF HOUSEHOLD 12
Recommendation 13

CAREER CHOICES AND PLANS

FINDING 6 PLANS AFTER GRADUATION FROM HIGH SCHOOL 13
Recommendation 14
FINDING 7 FACTORS RELATED TO MAKING A CAREER CHOICE 14
Recommendation 14
FINDING 8 SOURCE OR PERSON MOST HELPFUL IN MAKING CAREER CHOICE 15
Recommendation 15
FINDING 9 OCCUPATIONAL OR CAREER CHOICES OF HIGH SCHOOL SENIORS 16
Recommendation 17

PLANS OF HIGH SCHOOL SENIORS WHO PLAN TO CONTINUE THEIR EDUCATION IMMEDIATELY UPON GRADUATION

FINDING 10 THE MOST IMPORTANT REASONS FOR SELECTING A PARTICULAR SCHOOL OR COLLEGE 17
Recommendation 17
FINDING 11 SENIOR'S CHOICE OF CURRICULUM: BACHELOR OR HIGHER DEGREE 18
Recommendation 18
FINDING 12 SENIOR'S CHOICE OF CURRICULUM: CERTIFICATE OR ASSOCIATE DEGREE LEVELS 19
Recommendation 19
FINDING 13 METHODS PLANNED TO FINANCE EDUCATION 20
Recommendation 20
FINDING 14 LOCATION OF SCHOOL CHOSEN 21
Recommendation 21

TABLE OF CONTENTS (CONTINUED)

		Page
WHY SOME SENIORS PLAN TO DELAY--OR NOT CONTINUE--THEIR EDUCATION		
FINDING 15	*WHY SOME SENIORS PLAN TO DELAY CONTINUING THEIR EDUCATION*	21
	Recommendation	21
NOTE:	*Why Do So Many Indiana High School Seniors Delay Continuing Their Education? (Statement by Dr. John P. Hesemann of DPI)*	22
FINDING 16	*WHY SOME HIGH SCHOOL SENIORS DO NOT PLAN TO ENROLL IN ANY EDUCATIONAL PROGRAM AFTER GRADUATION*	24
	Recommendation	24
INTERRELATIONSHIPS		
FINDING 17	*INTERRELATIONSHIPS OF CHARACTERISTICS AND PLANS OF INDIANA HIGH SCHOOL SENIORS*	24
	Recommendation	25
NOTE:	*HIGH SCHOOL SENIORS' PLANS--NATIONAL*	26

CHAPTER IV
CHARACTERISTICS, PLANS AND ATTITUDES OF FIRST-YEAR COLLEGE STUDENTS (NATIONAL NORMS)

CHARACTERISTICS FINDINGS		
FINDING 1	*AGE*	27
	Recommendation	27
FINDING 2	*RACE*	27
	Recommendation	27
HIGH SCHOOL GRADE AVERAGE AND ACADEMIC RANK		
FINDING 3	*HIGH SCHOOL GRADE AVERAGES OF COLLEGE FRESHMEN*	27
	Recommendation	28
VETERAN STATUS AND MARITAL STATUS		
FINDING 4	*VETERAN & MARITAL STATUS*	28
	Recommendation	28
TYPE HIGH SCHOOL AND PROGRAM ENROLLED IN		
FINDING 5	*TYPE HIGH SCHOOL PROGRAM ENROLLED IN*	28
	Recommendation	28
FINDING 6	*TYPE HIGH SCHOOL ENROLLED IN*	28
	Recommendation	28
RESIDENCE		
FINDING 7	*RESIDENCE PLANNED--RESIDENCE PREFERRED*	28
	Recommendation	28
PHYSICALLY HANDICAPPED		
FINDING 8	*TYPES OF PHYSICAL HANDICAPS*	29
	Recommendation	29
COLLEGES APPLIED TO FOR ADMISSION		
FINDING 9	*NUMBER OF COLLEGES APPLIED TO*	29
	Recommendation	29
DISTANCE FROM HOME TO COLLEGE		
FINDING 10	*DISTANCE FROM HOME TO COLLEGE*	29
	Recommendation	29
REASONS FOR SELECTING OR GOING TO A CERTAIN COLLEGE		
FINDING 11	*MOST IMPORTANT REASONS FOR GOING TO COLLEGE*	30
FINDING 12	*REASONS FOR SELECTING A CERTAIN COLLEGE*	30
	Recommendations	30
DEGREES PLANNED		
FINDING 13	*HIGHEST DEGREE PLANNED ANYWHERE*	30
FINDING 14	*HIGHEST DEGREE PLANNED AT COLLEGE ATTENDED*	30
	Recommendations	30

TABLE OF CONTENTS (CONTINUED)

	Page
PROBABLE FIELD OF STUDY AND CAREER CHOICE	
FINDING 15 PROBABLE FIELD OF STUDY	31
FINDING 16 MOST POPULAR CAREER (OCCUPATION) CHOICES	31
Recommendations	31
FINANCIAL AND RELATED MATTERS	
FINDING 17 MEETING FIRST YEAR COLLEGE EXPENSES	32
Recommendation	32
CHARACTERISTICS OF PARENTS	
FINDING 18 PARENTS' OCCUPATION AND EDUCATION	33
Recommendation	33
ATTITUDES OF COLLEGE FRESHMEN	
FINDING 19 STUDENTS' POLITICAL VIEWS, OBJECTIVES, OPINIONS, AND ESTIMATE OF THE FUTURE	34
CHAPTER V	
HIGHER EDUCATION AND ECONOMIC GROWTH	
HIGHER EDUCATION AND ECONOMIC GROWTH	35
BETTER PROSPECTS FOR AN AILING ECONOMY	36

ATTACHMENTS

Selected Articles and Extracts

		Page
I.	HIGHER EDUCATION AND JOB PREPARATION *by Carter A. Daniel*	39
II.	MOST COLLEGES SAID TO LAG IN 'MARKETING' *by Lorenzo Middleton*	40
III.	ENROLLMENT, MARKETING, AND RETENTION IN THE COMING DECADE *by David E. Hershey*	41
IV.	COLLEGE OR UNIVERSITY SERVICES TO A COMMUNITY *by Howard Ray Rowland*	49
V.	POSTSECONDARY EDUCATION FOR ADULTS *by Donald R. McNeil*	51
VI.	RETENTION IMPROVEMENT *by Cathy Henderson*	53
VII.	IMPACT OF FEDERAL YOUTH INITIATIVES (e.g., Military Service) *by J. P. Lisack*	56
VIII.	INDIANA'S POPULATION 1970-1980 BY ETHNIC GROUP *by J. P. Lisack*	57
IX.	THE ENROLLMENT BOOM AMONG OLDER AMERICANS: 1 in 3 College Students Is Now Over 25 Years Old *by Jack Magarrell*	61
X.	AS EDUCATION HEADS INTO A "BABY BUST" COMPETITION AND DIVERSITY WILL PREVAIL *by Peter F. Drucker*	64

CHAPTER I

INTRODUCTION AND DESCRIPTION OF THIS REPORT

1. BACKGROUND

A good deal of public interest has been expressed in postsecondary education in Indiana. Several presumptions have evolved from this interest, including the following:

(1) Indiana has one of the lowest college attendance rates (of recent high school graduates) in the Nation.

(2) The postsecondary level of education of the Indiana adult population is below the National and Midwestern Region averages.

(3) The numbers of Indiana high school seniors (and graduates) will be decreasing significantly during the next decade.

(4) Indiana high school students are lower academic achievers than are students from other Midwestern states or the National averages, as measured by college admission tests.

(5) More Indiana high school graduates leave their home state to participate in postsecondary education elsewhere than vice versa.

(6) The career choices and educational plans of high school seniors and college freshmen are changing significantly.

(7) There are important relationships between the economy of the State and postsecondary education.

Facts concerning the above presumptions and answers to some related questions are of great significance to all concerned with postsecondary education in Indiana. Therefore, one of the primary purposes of this study is to provide relevant data and answers to pertinent questions.

Wherever appropriate and available, comparative data (i.e., Indiana vs. Midwestern states and National averages) are presented. Recommendations are made for each major finding based on the report data, and appropriate attachments provide related information from other sources.

2. PURPOSES

The participants of this study are hopeful that these data and materials and recommendations will, among other things, serve the following purposes:

(1) Provide data and facts leading to greater insights and understanding of postsecondary education in Indiana and motivating constructive actions.

(2) Establish base lines of status/data which will facilitate trend, comparative measurements, and progress studies in the future,

(3) Enhance decision making, planning, and implementing actions which will be constructive and helpful to both secondary and postsecondary educational institutions as well as to pertinent agencies and organizations,

(4) Result in planned actions designed to assist future students, including adults as well as recent high school graduates, in advancing their educational levels, and

(5) Ultimately assist in the further development and stability of the State's economy.

If the purposes of this study are met, even in part, the college-going rate of Indiana citizens should increase, thereby improving their personal, social and economic well being. Achieving this goal should also help to meet Indiana's employers' needs for educated employees, thusly enhancing the economic conditions within Indiana.

3. SUPPORT

The members of the Indiana Conference of Higher Education determined that the importance of the above matters necessitated their involvement and support. Accordingly, a steering committee assisted the author in the formulation of the study design and participated in the development of the findings and recommendations presented in this report. The members of the steering committee include Dr. Louis C. Gatto, Rev. Charles Banet, Dr. Raymond S. Butler, Dr. Richard G. Landini, and Prof. Nelson M. Parkhurst. Their titles and positions are identified earlier in this report.

A proposal was prepared and processed through the Indiana Conference of Higher Education to Lilly Endowment, Inc., which in turn approved the project and provided most of the financial support of this study. Indirect support, facilities and computer services were provided by Purdue University.

4. THE FOUR REPORTS

The complete study of postsecondary education in Indiana is presented in four reports:

(1) The first report contains extensive information and data about past, present and future enrollments in Indiana high schools and the various colleges and universities in Indiana. Student migration and out-of-state enrollments are included. In this first report the Indiana high school graduates "college attendance rate" is computed and compared against the rates of other Midwestern states and National averages. A like comparison is made of the College Board Scholastic Aptitude Test (SAT) results; a supplement monograph also addresses college admission

test results. Finally, the levels of education attained by Indiana adults are compared with those of other states and National averages.[1]

(2) The second in the series of four reports answers questions such as: What are the changing characteristics of Indiana high school seniors and what are their choices and plans after graduation? How definite are their plans? What are the reasons that seniors give for the choices they make, where did they get their information and who helped them most? Also, what are the characteristics of the head of household? The answers to these and other questions given by seniors in the Class of 1980 are compared with seniors in previous classes and are described in the second report. Some important comparisons and interrelationships are included, by sex and by ethnic group.[2]

(3) The third report is about first-year college students. What are the characteristics, plans and attitudes of men and women freshmen in college? Are Indiana students significantly different from the National "Norms?" If so, in what ways and how much? Unfortunately, in this National survey, the Indiana sample of nearly 7,000 freshmen is not representative of the universe of all freshmen in Indiana colleges and universities (it is heavily weighted toward freshmen in private colleges rather than an appropriate balance between private and public institutions). Therefore, in this summary report, the "National Norms" data and findings are presented. See MR 81-2 for comparisons between freshmen in the Indiana sample and National Norms.[3]

5. FORMAT AND DESCRIPTION OF THIS REPORT

This particular report (Part 4 of four parts) summarizes the previous reports and provides additional information and recommendations concerning postsecondary education in Indiana. This final report is made up of six chapters:

Chapter 1 presents the introduction and description of report.

Chapter 2 contains the major findings and recommendations concerning enrollments, postsecondary participation rates, College Board admission test results, and the educational attainments of the Indiana adult population.

Chapter 3 presents the major findings and recommendations concerning Indiana high school seniors, their characteristics, and their plans.

1/ *POSTSECONDARY EDUCATION IN INDIANA: ENROLLMENTS AND EDUCATIONAL ATTAINMENTS. Manpower Report 80-2, dated 24 September 1980. SUPPLEMENT TO PART 1. Also, A COMPARISON STUDY OF THE COLLEGE BOARD SCHOLASTIC APTITUDE TEST SCORES BETWEEN STUDENTS IN INDIANA, THE MIDWESTERN REGION, AND THE NATION. Monograph 80-1, dated 10 November 1980.*

2/ *CHARACTERISTICS AND PLANS OF INDIANA HIGH SCHOOL SENIORS, Manpower Report 81-1, dated 1 February 1981.*

3/ *CHARACTERISTICS AND PLANS OF FIRST-YEAR COLLEGE STUDENTS: A COMPARISON OF INDIANA FRESHMEN AND NATIONAL NORMS FOR THE FALL OF 1980, Manpower Report 81-2, dated 1 May 1981.*

Chapter 4 presents the characteristics, plans and attitudes of college freshmen based essentially on "National Norms."

Chapter 5 presents some relationships between higher education and the Indiana economy.

Attachments: Also included are selected articles and data bearing on postsecondary education and which reflect some of the problems and opportunities presented in this study.

CHAPTER II

ENROLLMENTS AND EDUCATIONAL ATTAINMENTS

FINDING 1, NEW ENROLLEES. In last year's class the new (beginner students) enrollees in all colleges and universities in Indiana (83% or 74,463 people) were graduates from Indiana high schools. This number includes both part-time and full-time students.

Thirty-six percent of all new enrollees had graduated from last year's Indiana high school class and 47% had graduated in earlier years. Seventeen percent of new enrollees came in from out-of-state. Other evidence also has pointed to the fact that more people are delaying for one or more years continuing their education after completing high school.

Recommendation: Because this "delayed education" group is now the largest segment of new enrollees, the postsecondary system of admissions and procedures should be designed to accommodate them as well as the preceding year's high school graduates. Postsecondary program/course information, counselling and other services should be specially designed and provided on a continuing basis for those who have delayed continuing their education. Applications, admissions, and other procedures should be designed to accommodate this adult group. Once enrolled, tutorial, remedial and other needed assistance must be provided to assure that the re-entry and survival of these adults in academe is successful.

If these adults are to be served well, it is essential that the courses/programs that they need and desire are determined and given priority in planning and implementing actions.

NOTE: Because the composition of new enrollees was not the same at all institutions, the degree of applicability of this finding and recommendation will vary between colleges and universities. See Attachments for related articles.

FINDING 2, COLLEGE ATTENDANCE RATES AND EDUCATIONAL LEVEL ACHIEVEMENTS. The college attendance rate of Indiana's high school graduate has been determined to be about 46%. This is approximately 3 to 4 percent lower than the National rate of 50%, and about 2 percent lower than the Midwestern regional rate of 48%. This finding is based on survey data in Indiana and is corroborated by various statistical reports. It is further substantiated by the fact that the proportion of Indiana adults (>18 years) who have completed one or more years of college (24.8%) is about 3 percent below the East North Central Region average and it is more than 5% below the National average. This lower achievement at postsecondary levels is not due to the fact that the proportion of Indiana adults who have completed high school is low. In fact, the opposite is true; data show that proportionately more Indiana adults (>18 years) had completed four years of high school than adults in either the North Central Region or the National average. (This low postsecondary achievement level is not caused by lower academic abilities of high school students as measured by college admission tests--which is explained in a later finding.)

*Manpower Report 80-2, "Postsecondary Education in Indiana...." op. cit.

It is clear that Indiana citizens do not continue their formal education after graduation from high school at rates comparable to adults in the Midwestern Region or the National average.

Recommendation: It is recommended that there be a recognition of the fact that Indiana's adult population is less well educated at the postsecondary levels than are adults in the Midwest and Nationally. Second, there should be a determination on the part of those in responsible positions in secondary and postsecondary educational institutions and appropriate agencies to embark on programs designed to remedy this lower-than-average status.

NOTE: It was suggested during the review of these findings that perhaps the postsecondary educational levels of Indiana's citizens were already "adequate" for this State. The author and steering committee members reject the premise that the citizens of this State somehow should be less privileged to enjoy the benefits of a college education or are working in occupations requiring lower-than-average Midwestern or National postsecondary level education. In fact, an examination of the "Professional and Technical" and other categories requiring special education in the Occupational Employment Statistics Program reports (for each type of industry, issued by the Research and Statistics Section, Indiana Employment Security Division) discloses that the types of industries and occupations in Indiana are quite typical of the Midwestern Region. Further, there are valid arguments for the updating of the skills and knowledge of people to keep them competent, prepare for new or higher level jobs, and to broaden their knowledge. Finally, it is believed that a well-educated population and work force, and a responsive educational system will serve to hold and even to attract industry to this State and enhance its economy.

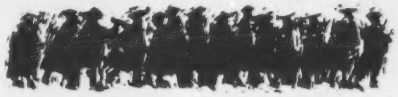
NOTE: It is granted that it is difficult to measure the potential need for or the additional value of a given educational program. Neither the staffs of educational institutions, government personnel or other researchers, or other organizations have measured so-called cost effectiveness of postsecondary education accurately. However, data are available which irrefutably support the following: 1) in general, the better educated person suffers the lowest unemployment rate, 2) the better educated person enjoys a higher salary level, 3) the better educated person enjoys a more successful career progression, 4) the better educated person is more likely to meet the standards and/or requirements for licensure, registration or certification in many professions, 5) there are also intangible and intrinsic satisfactions and advantages that many people enjoy who have engaged in postsecondary studies.

FINDING 3, PROJECTED ENROLLMENTS

FINDING 3A, INDIANA HIGH SCHOOLS. Twelfth grade enrollments and numbers of public high school graduates reached their highest peak in 1976-77, namely, 78,636 graduates: the number dropped in 1977-78, and recovered slightly in 1978-79 (to 77,418). However, a significant downtrend has begun, which is projected to continue until 1986-87, when a modest reversal will occur for three years, followed by another sharp drop. By 1989-90, the projection is for there to be only 60,582 graduates from Indiana public high schools. The pattern of the numbers of non-public high school graduates is somewhat erratic, but data also indicate a general downtrend. (There are now about 4,500 graduates per year from non-public high schools in Indiana.)

Recommendation: Consideration of these demographic forecasts must be taken into account in institutional planning. Actions can be taken--or strengthened--which are designed to: (1) Decrease the high school drop-out rate, (2) Decrease the number of good students who leave the State to study elsewhere, (3) Increase the interest and motivation of more high school students to continue their post-secondary studies (slightly less than half now do), and (4) Counsel more academically qualified students to pursue college preparatory type courses while in high school and prepare for college in other ways.

FINDING 3, PROJECTED ENROLLMENTS* (continued)



FINDING 3B, COLLEGES AND UNIVERSITIES IN INDIANA. There has been a steady growth of total undergraduate enrollment in both public and private institutions during the past 20 years, from 74,296 in 1960 to 182,597 in 1980. The most significant increase of more than 100,000 students was enjoyed by the public colleges and universities; however, enrollments in private institutions in Indiana increased less than 11,500 (from 31,260 to 43,103) during this period.

There was a parallel undergraduate college enrollment growth of both men and women from 1959-60 until 1971-72, with a fairly constant difference of about 24,000 more men enrolled than were women during this period. Since 1972 however the enrollment of women has increased faster than men, so that by 1980-81, there was an undergraduate enrollment difference of fewer than 5,000 between the sexes (98,448 men and 93,622 women students). It appears there should be equal distribution between sexes in the near future. It is noteworthy that 1980-81 saw the largest enrollment to date of college freshmen in Indiana (88,623).

Total undergraduate enrollment in colleges and universities reached its highest point in 1980-81 (192,067 students). The total enrollments of graduate, professional and others also reached a high point in 1980 (52,248).

A steady decline of total undergraduate enrollment is being projected from 1979-80 to 1987 (to 141,550). Also, a decline in college freshmen is projected to 1986 (to 52,128). A very modest increase is then expected to 1988, when another decline is projected, ending in a low of 46,800 freshmen and a total undergraduate enrollment of 126,536 in 1994-95. These projections are based essentially on the numbers of births in appropriate preceding years.

There has been a net in-migration gain of first-time college students (into Indiana) in each of the four separate years for which data are available. Indiana gained an average of nearly 4,000 students in 1958, 1963, and 1968; the net gain, however, dropped significantly in 1975 to slightly over 2,000. This drop was due to an increase of Indiana student out-migration from about four thousand in both 1963 and 1968 to more than seven thousand in 1975.

**See findings and recommendations related to MR 81-1.*

Recommendations (to Finding 3B): Inasmuch as (1) the projection data indicate a significant decrease in enrollments, based on births in preceding years; and (2) the "catch up" phase of the enrollment ratio of women to men is about completed; and (3) the net gain in the in-migration of college students appears to be nearly over, actions must be taken, by each institution, if they are to at least maintain the status quo in enrollments.

*Possible enrollee sources (which will vary by institution) include:**

1) Encourage (or stimulate) a larger proportion of high school graduates from each Indiana graduating class to continue their studies,
2) Retain a higher percentage of students once enrolled,
3) Reduce the number of Indiana graduates leaving to study in other states,
4) Enroll more adult students of both sexes (both part and full time),
5) Offer needed night and continuing education courses (both credit and non credit),
6) Implement joint educational programs with business and industry,
7) Conduct seminars, workshops and conferences (based on interest and need),
8) Establish closer, purpose-oriented relationship with high school counselors, and
9) Develop and implement a comprehensive marketing plan (See Attachments for related articles.)

NOTE: Other findings and recommendations described later in this report address related facts; such as why students plan to continue their education, what their best sources of information are, why they select certain programs (and what they are, etc.,).

NOTE: An example of continuing education is to offer a variety of non-credit courses, ranging from the practical (such as special accounting courses for both accountants and non-accountants) through professional and recreational types. Courses can be taught by both regular and extension faculty members and local members of professions. Opportunities should be granted to qualified students to enroll in both (or either) university credit courses or non-credit work. (See Attachments for related articles.)

FINDING 4, COLLEGE ADMISSIONS TESTING PROGRAMS. Student participation in the College Board Admissions Testing Program (ATP) varies widely among states because of different institutional entrance requirements, college attendance patterns, scope of guidance programs, etc. Although SAT scores of Indiana high school seniors are consistently lower than the verbal and math score averages of other states in the Midwest as well as the National average, a much higher proportion of Indiana students in each class takes these tests.

Accordingly, these variables make direct comparisons of test score data very questionable.

**(See MR 80-2 for present distribution of enrollees by source.)*

NOTE: The Scholastic Aptitude Test (SAT) is part of this testing program; test results are used by many colleges and universities in their admissions procedures. There are also Preliminary SAT (PSAT) and National Merit Scholarship Qualification Tests (NMSQT) taken by high school juniors. Approximately one million high school students participate in the ATP. Ref. MR 80-2 Op. Cit.

Although the proportion of Indiana high school juniors taking the PSAT/NMSQT is higher than the Midwestern states or National averages, the proportions of Indiana juniors taking these tests are closer--and so are the test results. In fact, Indiana's PSAT scores are slightly higher in Math and nearly match the National verbal test averages.

An examination of the relationships between the proportions of students in a given population who take ATP tests and their scores, reveals that the higher the proportion who take these tests, the lower the average scores attained. When these data are plotted and analyzed, results indicate Indiana high school students average at least as well as other students in the Midwest or the National averages.

In light of the foregoing, there is insufficient directly comparable evidence to conclude that Indiana high school students' College Board test achievements are any lower than are those in other Midwestern states or the National averages.

This premise is strongly supported through examination of data taken from results of high school students taking another popular college admission's test, namely, the American Colleges Test (ACT) Program. In this case the proportions of Indiana high school students in any given class taking the tests are smaller than National proportions. Interestingly the data show that Indiana students who took the ACT scored higher in every subject tested than did the National (class) populations. *(See Monograph 80-1, "A Comparison Study of the College Board Scholastic Aptitude Test Scores Between Students in Indiana, the Midwestern Region, and the Nation," 10 November 1980, by Dr. J. P. Lisack, Director, Office of Manpower Studies, Purdue University, West Lafayette, Indiana 47907.)*

Recommendation: It is clear that data do not support the contention that Indiana high school students do not score well (e.g., match Midwestern Region or National averages) on college admissions' tests; indeed, they may score slightly higher than these averages, all things considered. It is therefore recommended that this assumption be accepted that as a whole, Indiana high school graduates are as capable academically as those from other states to continue their postsecondary studies successfully.

CHAPTER III

CHARACTERISTICS AND PLANS OF INDIANA HIGH SCHOOL SENIORS*

CHARACTERISTICS

FINDING 1, SEX DISTRIBUTION

There were about 1% more females than males enrolled as seniors in Indiana's high school Class of 1979-80, as determined in a recent survey. (See MR 81-1.) As pointed out in Chapter I, the college freshmen enrollment of females is now nearly the same as that of males.

Recommendation: Recruiting and counseling efforts must be directed to both sexes. Career opportunities which in the past have been somewhat sex-stereotyped should be emphasized as attractive to all prospective students (e.g., engineering, technology, business and management for females, computer science and technology for both sexes, nursing and therapists' careers for males, etc.).

FINDING 2, RACE

The distribution by race of Indiana high school seniors participating in the survey was:

Caucasian (White)	82.2%	Non-response	1.9%
Black	7.1%	All other	7.0%
Spanish American	1.8%		100 %

NOTE: The 1980 Census data (PHC80-V-16) issued in March 1981 by the Department of Commerce, Bureau of the Census reported Indiana's ethnic population distribution to be:

Population	By Race			%
Total	White	Black	Other	Black
5,490,179	5,004,567	414,732	70,880	7.6%

In 1970, Black persons comprised 7.2% of the State's population. See Attachment VIII for a breakdown by county and major cities of Indiana's 1980 population by ethnic group.

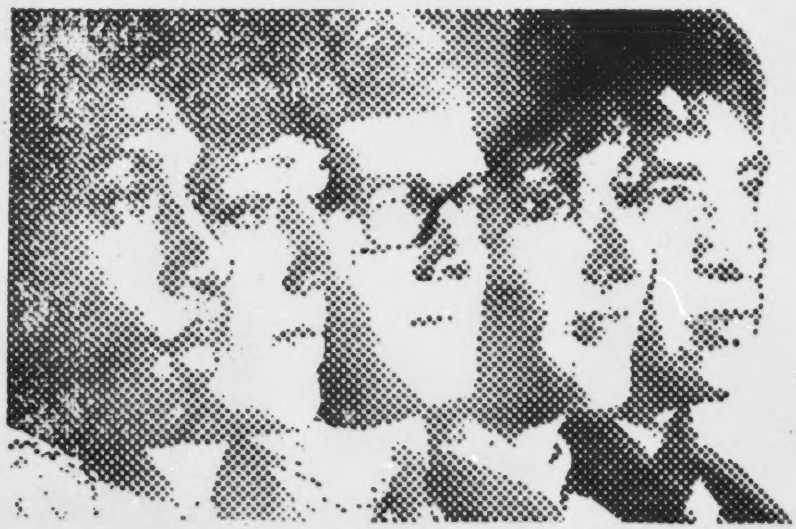
Data and findings in this chapter are based on a survey of the 82,668 Indiana high school seniors in the Class of 1980. See Manpower Report 81-1, "Characteristics and Plans of Indiana High School Seniors; Trends in the Characteristics, Career Choices, and the Educational and Employment Plans of Indiana High School Classes of 1966, 1969, 1972, 1975, and 1980 with Comparisons by Ethnic Group and Sex," Part Two of a Four-Part Study, 1 February 1981, Dr. J. P. Lisack, Director, Office of Manpower Studies, Purdue University, West Lafayette, Indiana.

FINDING 3, HIGH SCHOOL TYPE PROGRAM ENROLLED IN

There was an earlier trend (data taken from surveys of the high school Classes of 1969 and 1975), for proportionately fewer high school students to be enrolled in "College Preparatory" type programs (i.e., more students reported they were enrolled in Business Education, Vocational Education and the "Other" types). However, it appears the College Prep. group has now stabilized at between 35 and 36% of each high school senior class. Data show that a much higher proportion of seniors in College Prep. type programs plan to continue their education upon graduation.

Recommendation: It is essential for all junior and senior high school students to be provided adequate career and educational counselling in order that they make informed choices and plans and that the courses they take are preparatory to the extent possible, for their anticipated career choice and continuation of education. Further, college and university administrators (particularly admissions officers and those preparing brochures, information bulletins and the like) should realize that approximately two-thirds of the seniors in each of Indiana's graduating classes are enrolled in high school programs other than college preparatory. Many of these students are qualified to apply for college admission; they should be provided pertinent information and encouragement to continue their education.

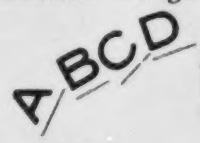
Also, there are different proportions of seniors enrolled in these programs by type of groups --e.g., proportionately more white students than black are in college prep. programs, more males than females are in vocational types, but more females are in business, etc. See MR 81-1 for details. These differences should be taken into consideration in postsecondary education planning.



NOTE: There are many highlights and much data in the referenced manpower report (81-1) which are not presented in this final report. The author has extracted some few examples and presented some recommendations indicative of their value in improving postsecondary education in Indiana.

FINDING 4, HIGH SCHOOL GRADE AVERAGE

The proportion of "A" and "B" average students' grades has been increasing over the years. In the last class, the distribution of grades was



A	13.8%	D	2.7%
B	44.1%	Unkn	2.5%
C	36.2%	N/R	.7%
			100 %

(In 1966, when the first survey of Indiana high school seniors was made, only 6.1% were "A", 32.4% "B", and 46.6% were "C".)

Recommendation: Because grade inflation has been a steady trend over the years, care must be taken to avoid placing too much emphasis on grades in final admissions actions, establishing standings or rankings, or determining academic levels of proficiency. Also, because of the differences in earning and awarding grades between high schools, inter-high school comparisons should be made only after careful study.

NOTE: Two contra-indicating phenomena are being reported in Indiana as well as across the country--1. more high school students are earning higher grades since 1966, and 2. high school seniors' scores on the Scholastic Aptitude Tests (SAT) have dropped dramatically since 1968. Average SAT Math scores in 1968 were above 500--and were 466 in 1980: average SAT Verbal scores dropped from about 478 to 424 during the same time. The SAT scores are often used as an indicator of college readiness of a large number of students. (See Chapter II of this report for discussion of SAT scores in Indiana.)

FINDING 5, CHARACTERISTICS--HEAD OF HOUSEHOLD

In each of the surveys of Indiana high school seniors during the past ten years, a growing proportion reported that their Mothor or Other was head of household. Specifically, in the Class of 1969 nearly 87% of the seniors had reported Father as head of household. In each subsequent survey, the proportion of Father heads of household decreased, and had dropped to about 79% in the Class of '80. The significance of this finding on enrollments is the fact that proportionately more of the seniors who reported Father as head of household did plan to continue their (postsecondary) education. Data also show that family income is higher where Father is head of household which is another factor in continuing education.

Data indicate a trend for the highest level of education attained by Indiana heads of household to rise over the years: this is consistent with National trends. In the last class fewer than 15% of the heads of households had not completed high school, 41% had graduated from high school but had no postsecondary education, about 17% had some college but had no bachelor's degree and about 25% had earned one or more degrees. Data show that a higher proportion of students continue their education whose parent(s) have been to college.

Recommendation: There must be consideration made of the fact that more than 20 percent of Indiana high school seniors are members of a family headed by a Mother or Other, and this proportion is growing; this reflects a greater possibility of lower income and financial support for postsecondary education. There are undoubtedly other ramifications besides financial assistance; these should be searched out and programs designed to alleviate problems where feasible.

*FEMALE-HEADED HOUSEHOLDS**

New Census Bureau data show an explosive growth in the number of women who are heads of household. During the 1970's the report states that families headed by women increased more than 51% from 5.6 million to 8.5 million.

Because women often earn less than men, and these families generally lack the benefit of a second income, they face particular economic hardships, with a median income less than half that of all families ($8,540 for women vs. $17,640 for all families in 1978).

However, husband-wife units still comprise 82.5% of all families, compared with 14.6% maintained by a woman and 2.9% maintained by a man only. Among Whites 12% of all families were maintained by women, while females headed 20% of Hispanic families and 41% of Black families.

Families headed by females are distributed across the country in basically the same manner as other families. The median age of women maintaining families in 1979 was 42 years, down from 48.2 in 1970 as more younger women chose to have their own homes.

**Taken from a Washington, D.C. (AP) article in the 13 December 1980 Journal & Courier Newspaper (Lafayette, Indiana), J. P. Lisack.*

CAREER CHOICES AND PLANS

FINDING 6, PLANS AFTER GRADUATION FROM HIGH SCHOOL

More than one-third of Indiana high school seniors plan immediate full-time employment upon graduation, and roughly another third plan to continue their education full time. The remainder include more than 12% who plan part-time employment with part-time education, more than 4% plan to go into military service and nearly 4% plan to get married. More than 6% of the Class of '80 (representing more than 5,000 seniors) said either they didn't know what they planned to do, did not answer the question or had "other" plans.

Further, one-fourth of the class (representing well over 20,000 seniors) reported that their plans were "Indefinite," and nearly 2% did not indicate how firm their plans were.

Recommendation: It appears from the above data that a large group of between 20 and 25,000 Indiana high school seniors in the last graduating class have undetermined plans--it is therefore recommended that special counseling and assistance programs be directed toward this group, as undoubtedly a potential exists for many to benefit from sound personal planning and eventual participation in some type of postsecondary program.

FINDING 7, FACTORS RELATED TO MAKING A CAREER CHOICE

Nearly one-third of the high school seniors waited until their senior year to make their career (occupational field) choice; another 25% had made their decision during their junior year. For those who planned to go to college, this delay undoubtedly affected their choices of courses to prepare for their collegiate field of study.

Seniors were also asked to identify the most important reasons for choosing the career they did; their answers are considered to be significant to postsecondary education administrators. The single most important reason (most popular with all classes surveyed) was "Activities on the job." This was followed by "Money," "Kinds of people I'll work with" and "Serving society;" five other reasons drew only small responses. These same items ranked high as the second most important reason for choosing a career as well. (It is important to note, however, that although "Activities on the job" ranked highest, second and third choices varied considerably by individual groups. For example, "Money" rated higher with students who planned to become Engineers or Technicians, and "Serving society" was relatively lower: these are the reverse of the choices of seniors who plan to become Teachers or Nurses.)

Recommendation: Students should be provided with career information and be advised of the intrinsic values of broad based education (general studies) to their future careers early in their school work. By the time they are in junior high school, they should have received individual career and academic counseling. Parents should participate in these endeavors and should be provided with necessary information materials on careers and educational programs. Very important in such information are good descriptions of (1) the nature of the work in various professions and occupations, (2) qualifications and training (with licensing, registration, etc., requirements), (3) places of and outlook for employment and career progression, (4) earnings and working conditions, (5) where related training and educational programs are offered throughout the State--with admission requirements, costs, and other data, and (6) where to go for additional information.

College and university personnel should work closely with elementary, junior and high schools to ascertain just how they can assist in these key activities; they should provide necessary information, programs and participate in related activities.

It is also recommended that specific strategies and programs be designed to reduce the proportion of high school seniors--about to graduate--who are "Indefinite" or who "Don't know" what their plans are (now at about 25% of each high school senior class).

NOTE: Institutions engaged in the education and preparation of teachers should address themselves to the importance of activities related to career and educational planning of their students by instilling (implanting) these competencies and goals in their teacher training programs.

FINDING 8, SOURCE OR PERSON MOST HELPFUL IN MAKING CAREER CHOICE

"Parents and relatives" were the most helpful to seniors in making their career choices (reported by seniors in all classes surveyed), and the proportion is increasing (now more than one-third of all seniors). The next most helpful were "High school courses" followed by "Previous work experience," and "Teachers." Although "School activity programs" and "Career information systems" were not selected by many seniors as most helpful (>6%), the proportions of seniors making these choices have been increasing slowly. This is consistent with the growing emphasis on career development programs and the fact that career information dissemination systems are in early stages of implementation. (Apparently, printed materials and media are viewed as aids: undoubtedly they do help students, relatives, friends, teachers and counselors. They are not, however, identified by many seniors as being the most helpful source of information.)

Recommendation: It is recommended that institutions give priority consideration to these findings in designing career and educational information systems and in developing related materials. It is important that the parents and relatives of junior and senior high school students in particular be included in planning systems and distribution of materials. Teachers should tie subject matter to career or occupational applications wherever pertinent. Students experiencing success or showing preferences for certain types of work or courses should be counselled and advised individually to ascertain if aptitudes and interests favor looking into further specific career or postsecondary program plans. Wherever this is possible, student motivation and planning may well be enhanced.

NOTE: Barbara Hale, guidance director at Bishop Dwenger High School (Fort Wayne), reports that she has received very favorable comments from parents about the "Parent's Newsletter" which is mailed quarterly to every family at the high school. The Newsletter contains information regarding financial aid, college representative visits, testing dates, scholarship availability, class scheduling, and any item of importance of which students are made aware but may not be taking home to their parents. Barbara writes that the purpose of the Newsletter is "to strengthen the lines of communication between the counseling office and the parents so that together we can better meet the needs of our students."
Source: Counselor's Corner, Purdue Reports, April 1981, Volume 31, Number 8, West Lafayette, Indiana.

FINDING 9, OCCUPATIONAL OR CAREER CHOICES OF HIGH SCHOOL SENIORS

The most popular career clusters chosen in the Class of '80 were:

1. Health and Medical Related--13% of all seniors,
2. Clerical--6.7% of all seniors,
3. Teachers--also 6.7% of all seniors,
4. Engineers--6.4%,
5. Managers--6%,
6. Computer Related--4.9%

The most popular individual occupational choices of high school seniors (include--Engineers, Managers, Accountants, Secretaries, Secondary School Teachers, Technicians (both Medical and Technical), Registered Nurses, Computer Programmers, Lawyers, Beauticians, Auto Mechanics, and Clerks.

Among the trends that have developed over the past fifteen years in the changes of the more popular occupational choices of seniors are the following:

1. An impressive increase (>1%--which represents 1,000 or more students) in the proportion of seniors who have chosen certain popular occupations; these include:

   Engineer — Accountant
   Manager — Computer Programmer.

   It is important to note that in the above occupations, there has been important increases in the numbers of females who have become interested in related careers. Also, the computer field is a relatively new and dynamic field. In all cases, projections have indicated favorable career prospects and excellent salaries in the more popular occupational choices. (These reinforce other findings of this study which indicate that the most important reasons for going to college include "Get prepared for a better job or career," and to "Make more money.")

2. A distinct decrease (>1%) in the following relatively popular occupations:

   Secretary or Stenographer
   Secondary School Teacher, and
   Housewife.

3. Less impressive gains are evident for:

   Lawyer,
   Beautician (Cosmetologist), and
   Retail Store Manager.

4. Other less impressive losses in interest include:

   Automobile Mechanic — Factory Worker
   Registered Nurse* — Police or Security Officer
   Farmer — Social Worker.

A growing proportion of these high school seniors are opting for four-year college nursing programs and fewer for two-year or certificate programs.

NOTE: *See Manpower Report 81-1 for listing of all occupational choices.*

Recommendation: Although there is still some discussion about the appropriateness of "market studies" and emphasis on "employment preparation and career opportunities" in planning for higher education programs, the author has no hesitation in suggesting that student interest and desires with regard to these matters are relevant when enrollment matters and serving societal needs are being considered. It is therefore strongly recommended that each institution of higher learning consider career-oriented student activators and motivators, consistent with their philosophy and mission statements, in their planning, information dissemination, and course/program offerings. It need not be an either/or vocational preparation vs. general education confrontation in considering students' occupational choices, career plans and preparation for life: it is possible and desirable that both considerations be included in educational planning.

It is also recommended that each institution consider offering continuing education courses and updating seminars and workshops for graduates of the types of programs they offer for initial career preparation.

PLANS OF HIGH SCHOOL SENIORS WHO PLAN TO CONTINUE THEIR EDUCATION IMMEDIATELY UPON GRADUATION

FINDING 10, THE MOST IMPORTANT REASONS FOR SELECTING A PARTICULAR SCHOOL OR COLLEGE

There has been considerable consistency between surveys in the rank order of the most important reasons why seniors choose a particular college. By far, the most important reason given is "Offers what I want to study." A much weaker second choice is "Location near home," followed by the "Reputation or prestige of school." Amount of tuition and financial aid offered are also important considerations to high school seniors.

There has been close agreement over the years between high school seniors on the second most important reasons for choosing a school or college. The most frequently identified reasons included; "Reputation of school," "Location near home," "Offers what I want to study," and "Amount of tuition."

Recommendation: This recommendation is coupled with the preceding one (which concerns taking consideration of students' career and occupational choices in institutional program planning). It follows that if many seniors choose a particular college because it "Offers what I want to study," this reinforces the need for the institution to plan for, and to announce the availability of the courses and programs desired to the extent feasible with the philosophy, mission, and facilities of the institution.

NOTE: A student's choice of a particular institution of higher education is influenced by many factors. For example, availability of a specific educational program, quality of the school, cost, and location all play important roles.

For many students, however, an equally important factor is the institution's ability to provide for their housing, social, cultural, and recreational needs.

FINDING 11, SENIOR'S CHOICE OF CURRICULUM: BACHELOR OR HIGHER DEGREE (Associate degree choices are discussed on next page.)

The five most popular fields of study at the baccalaureate level remained the same in the last three high school classes surveyed--but the rank orders changed. The most popular in the last two classes is "Health or Medical Related," which displaced Education in '75. Education ranked first in '69 and '72, dropped to second in '75, and is now third. Second place is now Business and Commerce (due largely to an influx of females). Engineering moved up to 4th place in 1975 and remains there while law dropped to fifth.

Other fields of study that are gaining in popularity include Management and Supervision, Mathematics, and Computer Science, and Technology. Fields that have become less popular include Agriculture, Biological and Life Sciences, Home Economics, Physical Education and Recreation, and Social Science. There is a significant drop-off in the numbers of students selecting the less popular fields of study (after the four most popular fields).

More than 3,700 seniors identified a Health or Medical field, followed by more than 3,500 seniors in Business and Commerce, more than 2,800 in Education and nearly 2,750 in Engineering. The fifth most popular field was Law (pre-law) with nearly 1,700 students.

The most popular choices of baccalaureate programs chosen by Indiana seniors compare closely with the National rank order of program choices. For example,

	Rank Order		
	Indiana's		College Board-*
Field Chosen	Class of '80	Class of '75	National-1980
Health and Medical	1	1	2†
Business or Commerce	2	3	1
Education	3	2	4
Engineering	4	4	3
Law (pre-law)	5	5	Not listed
Fine and Applied Arts	6	6	5

†*Did not break out M.D.'s (pre-med.).*

**Source: National, College-Bound Seniors, 1980. Admissions Testing Program of the College Board.*

As indicated above, the field of study selections of Indiana seniors in the Class of '80 are all within one rank order of the National listing. Indiana's program popularity movement towards Business and Commerce and away from Education is consistent with the National rankings.

Recommendation: Consistent with previous statements and data, it is recommended that seniors' choices of curricula (and trends) be taken seriously into account when designing the academic offerings and services of each postsecondary institution. It is also recommended that efforts be made to provide high school students with adequate information about the advantages of certain program offerings (e.g., future career potential) so that they might make a better informed choice.

FINDING 12, SENIOR'S CHOICE OF CURRICULUM: CERTIFICATE OR ASSOCIATE (2 YEARS) DEGREE LEVELS

The rank order of the ten most popular choices of programs of less than 4 years' duration in the Class of '80 is shown below--together with their rank order in previous classes surveyed. Details of all programs of 2 years or less are shown in MR 81-1.

TWO-YEAR PROGRAM CHOICES OF INDIANA H.S. SENIORS
RANK ORDER COMPARISONS

Program (Field of Study)	1969	1972	1975	1980
Accounting	3rd	3rd	3rd	1st
Management & Supervision (incl. Business)	9th	8th	5th	2nd
Electronics Related	4th	6th	7th	3rd
Secretarial & Kindred	2nd	1st	2nd	4th
Computer Programming	5th	8th	10th	5th
Medical/Health Support	8th	5th	4th	6th
Nursing	1st	2nd	1st	7th*
Cosmetology/Beautician	10th	11th	12th	8th
Automotive & Diesel Technology	6th	4th	6th	9th
Communications or Broadcasting	N.L.	N.L.	19th	10th

*The most noticeable change is the drop in the rank order of Nursing (R.N.) programs from 1st to 7th place. However, this drop in associate degree nursing programs is offset by an increase in the numbers of seniors who indicate they plan to enroll in an R.N. baccalaureate level program. In the high school Class of '80, slightly more than 1,000 seniors indicated they planned to enroll in the B.S. R.N. program, and about 950 indicated their intention to enroll in an associate degree or certificate program. (There is now much discussion and activity promoting the B.S. program for professional nurse preparation.)

Another significant change is in Management and Supervision programs which have been growing in popularity. These programs now rank second, with the recent growth attributable largely to more females becoming interested in this field.

Electronics now ranks third, which is probably related to the growing emphasis on micro-circuits and modern electronics, and the many articles and information on related attractive current and projected career opportunities. This same optimistic view of growth and job opportunities applies to the growing popularity of the computer field. If the Computer Programming were combined with Computer Technology & Data Processing programs, this field would rank second in popularity because more than 1,550 high school seniors made these choices.

Secretarial and Kindred programs have been and remain very popular choices (now ranking 4th), as are Medical and Health Support programs.

Recommendation: Again the recommendation is to consider potential student program interests (and influence them where appropriate) in institutional planning and administration. An excellent curricular sequence is to offer both associate and baccalaureate programs in the same field. This provides some students with a stopping off plateau--work-ready with a degree in their chosen field--and an opportunity to continue at a later date to the baccalaureate level as the opportunity arises.

FINDING 13, METHODS PLANNED TO FINANCE EDUCATION

The same finding--that more students planned to help finance their education through parental or family support than any other means, was found in each of the five high school classes surveyed--in fact, there is a trend for a slightly higher percentage to identify parental means of financial support as time goes on. Parental or family support was identified by more than 80% of all seniors who plan to go to college. The second most popular method planned to finance education was personal savings, which was identified by 56% of those seniors planning to enroll in a college or university (in- or out-of-state).

The third and fourth most popular means to help finance post-secondary education was through working part time while in school (planned by more than 47% of the students), and full-time employment during the summer was planned by more than 43% of the college-bound students. Various grants and scholarships were each identified by between 20 and 25% of the students, and an educational loan was chosen by nearly 20%. Other financial plans are presented in detail in Manpower Report 81-1.

Unquestionably, the financing of education is of concern to most high school seniors planning to continue their education: a trend is developing which indicates students are planning on more than one method or source.

There are striking similarities of the rank order of Indiana students' plans to finance their education and the National survey results of college freshmen.* Results are shown below:

MAJOR SOURCES OF FINANCIAL SUPPORT (RANK ORDER)

	National College Freshmen*	Indiana's H.S. Class of '80
Parental or Family Aid	1st	1st
Personal Savings or Earnings	2nd	2nd
Scholarships, Grants, Gifts	3rd	4th
Employment	Not shown	3rd
Repayable Loan	4th	5th

*Source: Survey Report, "The American Freshman: National Norms for Fall 1979," Dr. Alexander W. Astin, Director, Cooperative Institutional Research Program, Graduate School of Education, University of California, Los Angeles 90024.

Recommendation: It is essential that every institution make financial data--both costs and availability of assistance--a part of their literature. Wherever possible internal and external work opportunities and other sources of financial aid must be provided. Financial assistance and services offices with sympathetic and qualified personnel are becoming more important each year.

FINDING 14, LOCATION OF SCHOOL CHOSEN

As stated in an earlier finding, more than 50% of all seniors in the Class of '80 planned to continue their education or training either full or part time after graduation. About 82% of these planned to attend a school located in Indiana (fewer than 36% chose a school within 25 miles of home and 47% chose one elsewhere in Indiana). Nearly 15% of the seniors continuing their education said the location of their chosen school was "Outside of Indiana," and the remaining 2.5% had not yet decided.

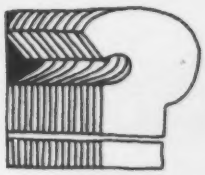
Recommendation: It is important for colleges and universities in Indiana to accommodate as many qualified Hoosiers as possible. Many of the findings and recommendations in this report pertain directly to how this might be done better--not only for each succeeding class of graduating seniors--but for adults who have graduated from previous classes as well. It is unfortunate that at the present time, many popular program enrollments are "capped," and qualified students cannot attend the institution and program of their choice: these instances should be remedied.

WHY SOME SENIORS PLAN TO DELAY--OR NOT TO CONTINUE--THEIR EDUCATION

FINDING 15, WHY SOME HIGH SCHOOL SENIORS PLAN TO DELAY CONTINUING THEIR EDUCATION

There were 12.6% of the survey respondents in the Class of '80 who indicated they planned to delay their education or training for six months or longer after graduation from high school. (This group represents more than 10,000 seniors.) The most popular reason for the delay was "I want to earn some money first." This was followed by those who wanted more time to decide what to do (nearly 2,800 seniors--who possibly could have been helped more in making their decision while still in high school). Some wanted to gain some work experience first and others planned to go into military service and then continue their education later. Relatively few said that getting married first would delay their education. (Reasons why some seniors do not plan at all to continue their education is presented on following pages.)

Recommendation: The more than 10,000 Indiana high school seniors in each graduating class who plan to delay continuing their education represent a reservoir of many potential college students. Qualified students in this group should be provided with counselling and assistance wherever possible so they might attend college uninterrupted, or their "delay" will not become permanent. The fact that 2,800 seniors said they wanted more time to decide what to do indicates that more information and assistance is probably needed while they are still in high school. College and university officials must try to work closer with high school counselors, students and parents to identify the help needed and provide same to the degree possible. (See Notes on "Why Do So Many Indiana High School Seniors Plan to Delay Continuing Their Education," on following two pages.)



NOTE: WHY DO SO MANY INDIANA HIGH SCHOOL SENIORS DELAY CONTINUING THEIR EDUCATION

Notes from presentation to the Indiana Conference of Higher Education as reactor to the Manpower Report 80-2, Postsecondary Education in Indiana: Enrollments and Educational Attainments by Dr. J. P. Lisack

Statements by:
Dr. John P. Hoesemann, Director
Div. of Educational Information and Research, Indiana Department of Public Instruction
11-5-80

The Report's most surprising statistic for me was the very high percentage of Indiana high school graduates who had delayed their enrollment in higher education. Who are these people? Why do they delay? How do their goals differ from those who go right on? Who counsels them?

To get some insight on these questions, we interviewed 16 high school counselors by phone for their reactions to this statistic and to Indiana's low college-going rate. We also took another look at the results of a survey of Indiana high school principals in which one of the questions was, "What do you feel are the principal reasons why qualified high school graduates do not enroll in some sort of post-secondary education program?" Responses of the counselors and principals question some of the assumptions I had, and perhaps you share, as to how high school students view higher education relative to their futures. I want to raise some of these questions.

First, do we assume that high school students value higher education and that most would participate if they had the financial resources to do so? Do we assume that the people who influence high school students--parents, teachers, counselors, peers--value higher education? Do we assume that high school students plan for the future, and that they know enough about opportunities in higher education in order to plan wisely? Do we assume that the year after high school is the most appropriate time to start higher education?

Many of the counselors and principals believe that seniors, in general, give immediate opportunities and obligations precedence over long range goals. Many high school students are employed. A survey in one high school found that 63% of the students have a job, and that those who work average 23 hours per week on the job. With free room and board at home, and earnings to spend on themselves, the temptation is strong to stay at home and continue their jobs after high school.

Many students in rural areas don't see career opportunities requiring higher education in their communities, and don't particularly want to leave home. Students in communities with a strong manufacturing base see good wages possible without college. Many of the counselors and principals felt that seniors lack confidence in higher education to help them get better-paying jobs. In recent years high school students have seen college graduates out of work, and the college graduates with whom they have had the most contact--their teachers--are sometimes striking for higher wages and are generally dissatisfied with their jobs. A recent survey by the NEA found that 41% of the teachers surveyed said that if they could start over with their college years, they would probably pursue another career.

Many of the counselors and principals questioned the maturity of high school seniors, citing a lack of purpose, suggesting that to go to college without a purpose is to invite failure. Yet counselors admitted that students no longer in school do not have ready access to good counseling about higher education. Almost all counselors get calls for help from ex-students. Some put in extra evening time. A few don't feel that it's part of their jobs.

If I can draw any implications from the remarks of these counselors and principals, it is that we need to help students to plan their post-secondary lives as early in their high school experience as possible so that they can fit their interests and abilities to potential careers, can see that there are more aspects to a career than the paycheck, that there is more to life than a career, and that careers must be flexible to changing demands. Then they need to see the role of higher education in these plans, not just in career planning, but in life planning. They need to recognize that higher education is a resource to be tapped whenever it is needed, not just between the ages of seventeen and twenty-one. For students who are ready to plan early, we need to supply the information after they have left high school, we need to find a way to get the information and counseling to them too.

What we have done in our mini-survey of counselors and principals is to try to get at student attitudes via the observations of those who work with students. Dr. Lisack's survey, which will be reported in Part II, has gone right to the students to answer some of these questions, and we look forward to those results.

FINDING 16, WHY SOME HIGH SCHOOL SENIORS DO NOT PLAN TO ENROLL IN ANY EDUCATIONAL PROGRAM AFTER GRADUATION

In the Class of '80, a total of 25% of the Class (representing more than 20,000 seniors), answered this question; that is, they had no intention of continuing their education now or later. This proportion is consistent with the seniors' plans after graduation, wherein 17% said they planned to work full time, no further education; 4% were going into military service; 2% were getting married and not going on with school; and 3% did not know, total of 26%.

The most frequently chosen reasons for not continuing education were "I plan to look for a job" and "I already have a job arranged," chosen by 12% of the seniors in the Class of '80. These choices were followed by seniors who were undecided what to do and those not interested in continuing their studies. Fewer than 2% said the reason they were not continuing was because they did not have enough money and most of them were knowledgeable about some financial aid sources.

Recommendation: Detailed data analysis revealed there are many seniors in this group of 20,000 seniors who are qualified for postsecondary education. It appears to the author that at least some vocational or business type courses should be in the future plans for some of these people. Institutions would do well to ponder the fact that 25% of the entire class indicated they had no plans, now or later or ever, to continue their education.

INTERRELATIONSHIPS

FINDING 17, INTERRELATIONSHIPS OF CHARACTERISTICS AND PLANS OF HIGH SCHOOL SENIORS

There are significant differences in the characteristics of seniors between groups (e.g., ethnic groups, sex, type program enrolled in, etc.): to cite a few examples comparing the two largest groups (White students who make up more than 82% of the Class, and Black students who make up more than 7% of the Class)--

(1) Proportionately more White and Asian students are enrolled in College Prep. type high school programs and took college admission tests. Proportionately more Black students are enrolled in Business Education and Vocational type programs.
(2) A much higher proportion of White students reports their grade average to be A or B (63%) compared with only about 34% of the Black students.
(3) More than 83% of White students report Father as their head of household, which compares to 51.4% of the Black students.
(4) More than 26% of the White students reported the head of their household had a college degree--more than twice the proportion of Black students.
(5) There are other important differences in individual plans, career/occupational selections, and educational plans and reasons for making different choices, by ethnic group and by sex.

Recommendation: Although generalizations made about the characteristics, career choices, employment and educational plans of Indiana high school seniors can be made from the Class as a whole data; these largely represent White students. Because there are significant differences between ethnic groups and by sex, it is recommended that Manpower Report 81-1 (Chapter VI, "INTERRELATIONSHIPS OF CHARACTERISTICS..." be studied for details.

NOTE: An examination of enrollment data between institutions shows a wide range of differences by (1) Sex, (2) From in-state/out-of-state students, (3) Ethnic group, (4) Full time vs. part time, and (5) by Age. Each institution should examine its student distribution by these characteristics, and decide which, if any, added actions or programs should be initiated or emphasized. For details of these distributions, by institution, see ANNUAL REPORT 1980, INDIANA COMMISSION FOR HIGHER EDUCATION, TABLE 4 (pg. B-8 and B-9).

NOTE: HIGH SCHOOL SENIORS' PLANS--NATIONAL

ONE IN TWO HIGH-SCHOOL SENIORS PLANNING COLLEGE WITHIN YEAR

More than half of the country's high-school seniors plan to begin a college education within a year after they graduate according to study released by the National Center for Education Statistics.

About 80 per cent plan to get some kind of postsecondary education eventually the study found.

The study was based on a 1980 survey of 28,000 seniors enrolled in 1,015 public and private high schools. It was conducted for the federal government's center for education statistics by the National Opinion Research Center at the University of Chicago.

The results showed a slight increase in the number of college-bound seniors compared with the number in a similar "longitudinal" study conducted in 1972.

The two studies showed marked differences in students' expected fields of study confirming other reports that business has replaced the social sciences as the most popular major over the past decade.

FIELDS OF COLLEGE STUDY PLANNED BY HIGH-SCHOOL SENIORS

	1980	1972		1980	1972
Business	22%	13%	Agriculture	2%	3%
Engineering	10%	5%	Architecture	2%	2%
Health services	8%	12%	English	2%	3%
Preprofessional	8%	--	Home economics	2%	2%
Education	6%	12%	Music	2%	3%
Computer & information science	5%	2%	Physical science	2%	3%
Social sciences	8%	17%	Foreign language	1%	1%
Art	4%	3%	Mathematics	1%	2%
Communications	4%	2%	Philosophy or religion	1%	1%
Vocational or technical	3%	3%	Other fields	4%	0.5%
Biological sciences	3%	10%			

1980 SENIORS' EDUCATIONAL EXPECTATIONS AND PLANS TO USE FINANCIAL AID

		Socio-economic status*		
	All seniors	Low	Middle	High
College				
Less than 2 years	3%	3%	3%	1%
2 years or more	12%	12%	14%	9%
4-year or 5-year degree	26%	16%	25%	37%
Master's degree	11%	5%	9%	22%
Ph.D. or professional degree	9%	5%	7%	17%
Vocational, trade, or business school				
Less than 2 years	8%	11%	9%	2%
2 years or more	11%	14%	13%	6%
High school graduation or less	20%	34%	19%	5%
	100%	100%	100%	100%
All financial aid (grants & loans)				
Federal	58%	78%	63%	42%
Nonfederal	56%	60%	59%	50%
Total	73%	87%	76%	62%

--Comparable figure for 1972 not available.
**The measure of socio-economic status includes family income, parents' education, and father's occupation.*

SOURCE: FACT-FILE, The Chronicle of Higher Education, April 13, 1981.

CHAPTER IV

CHARACTERISTICS, PLANS AND ATTITUDES OF FIRST-YEAR COLLEGE STUDENTS (NATIONAL NORMS)

*Source: MR 81-2**

CHARACTERISTICS FINDINGS

AGE

FINDING 1, More than 90% of all full-time college freshmen were 18 and 19 years old. Most of the part-time students are older adults.

Recommendation: More information and actions should be directed to adults in order to increase their full-time participation in postsecondary education. Many institutions today have excellent policies and procedures for newly graduated high school students but neglect the adult population. See Attachments for a more complete discussion of this subject. (Also Chapter II of this report contains some relevant facts and recommendations.)

RACE

FINDING 2, The large majority (86%) of freshmen in the National Norms were White (Caucasian); the Black/Negro group was next largest (9.2%). (In a separate survey of all Indiana high school seniors, more than 82% were White (Caucasian) and only 7.1% were Black.* Remedial and tutorial work and financial assistance is usually more frequently necessary for members of minority groups.*)

Recommendation: Efforts to recruit members of minority groups must be designed with the knowledge that in general many have characteristics different than the White majority. For example, because the high school grades of most Black students are lower and economic support is less, they will need more academic assistance (remedial and tutorial) and counseling as well as more financial assistance.

HIGH SCHOOL GRADE AVERAGE AND ACADEMIC RANK

FINDING 3, The high school grades of college freshmen were:

A or A+	9.1%	B+	19.2%	C+	11.8%
A-	11.7%	B	27.0%	C	7.5%
		B-	13.3%	D	.4%

In fact, nearly 40% of all college freshmen reported they ranked academically in the top 20% of their class. (About 58% of all Indiana high school seniors average B or above grades.)*

NOTE: These findings describe National Norms only as the Indiana sample is not representative of the total freshman population in Indiana. See Manpower Report 81-2 for details.

**Manpower Report 81-2, "Characteristics, Plans and Attitudes of First-Year College Students; A Comparison of National Norms with a Sample of Indiana Freshmen for Fall 1980, dated 21 April 1981, Dr. J. P. Lisack, Director, Office of Manpower Studies, Purdue University, West Lafayette, Indiana.*

Recommendation: It is clear that the majority of freshmen have been [academically] top high school students. Actions should continue to encourage all good high school students to continue their education: data indicate that the majority of B high school students do not continue their education and only a small proportion of C students go on. There is little question that many of such students, properly motivated, could be successful in college.

VETERAN STATUS AND MARITAL STATUS

FINDING 4, Fewer than 2% of the college freshmen were either married--about 2% were veterans.

Recommendation: Where possible, housing should be available for married students. Appropriate policies, progams and procedures should be in effect--and announced--to facilitate the admission and administration of married students and veterans.

TYPE HIGH SCHOOL PROGRAM ENROLLED IN

FINDING 5, More than 86% of all college freshmen said they had been enrolled in a college prep. type program while in high school. (In a recent study, it was determined that about 36% of all Indiana high school seniors were enrolled in a college prep. type program.)

Recommendation: Because proportionately more high school graduates who attend college prep. type programs go to college, it may be feasible to (1) Encourage a greater proportion of academically qualified students to consider enrolling in college prep. type courses while in high school, and (2) Consider what actions are necessary to inform qualified high school students in vocational, business, and general education programs of the advantages and opportunities of postsecondary studies, and motivate more of those students to prepare for college work.

TYPE HIGH SCHOOL ENROLLED IN

FINDING 6, Slightly more than 86% of all college freshmen had graduated from a public high school. (In Indiana 94.3% of all high school graduates are from public schools.)

Recommendation: Efforts must extend to students in all high schools in Indiana so they may make informed choices and plans as to their career choices, fields of study and continuing education.

RESIDENCE PLANNED--RESIDENCE PREFERRED (WHILE IN COLLEGE)

FINDING 7, More than half of all college freshmen (53%) planned to live in a college dormitory--but only 45% preferred such residence: nearly 36% planned to live with parents or relatives--but only 20% preferred to do so. What more freshmen preferred to do was to live in some other private home or apartment or in a fraternity/sorority house.

Recommendation: Housing authorities at each institution should study the desires of their students and the availability and costs of the housing available. This item is important to many students in making their choice of which institution to attend.

PHYSICALLY HANDICAPPED

FINDING 8, Fewer than 3% of all college freshmen reported they were physically handicapped: of these the most common type of handicap was visual (fewer than 1% of all freshmen), followed by orthopedic (one-half of one percent), then hearing (about one-third of one percent of all freshmen).

Recommendation: Whatever facilities, programs, or special accommodations an institution can or will provide to the handicapped should be included in brochures, catalogs, counselling materials, etc.

NUMBER OF COLLEGES APPLIED TO FOR ADMISSION

FINDING 9, More than 60% of all college freshmen had applied to more than one college for admission: nearly 80% of this group received one or more other college acceptance. Data indicate that about 25% of all freshmen are attending college other than their first choice.

Recommendation: It is necessary for the acceptance notice from an institution to be friendly, complete, and informative, in order to elicit a positive final decision by the applicant. An offer to answer questions or provide more information (perhaps include a no-charge telephone-call arrangement) should be considered. It would appear that a careful examination of each application separately could pay off, and questions or problems anticipated and handled in the initial response to each student wherever possible. An individual approach, rather than a blanket procedure should reduce the numbers of applicants who apply to a given institution, and end up enrolled in another.

DISTANCE FROM HOME TO COLLEGE

FINDING 10, Nearly 24% of the National group of freshmen attended a college within 10 miles from home. Previous surveys indicate that location is an important consideration--as are the types of programs offered, availability of housing, reputation of institution, costs, and availability of financial assistance.

Recommendation: Institutions concerned with attracting, enrolling and retaining qualified students must heed all of the above considerations seriously. Strategies and programs must be designed to capitalize on every related possibility which is positive, and disadvantages or problems must be anticipated with help or advice offered as early as possible.

MOST IMPORTANT REASONS FOR GOING TO COLLEGE

FINDING 11, The three most important reasons (rank ordered) in deciding to go to college, chosen by both National and Indiana freshmen were:

(1) Able to get a better job,
(2) Learn more about things, and
(3) Gain a general education.

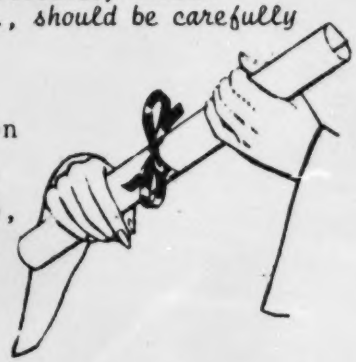
Each of these reasons was chosen by at least two-thirds of the survey responders. The fourth and fifth most popular choices were to make more money and to meet new, interesting people.

REASONS FOR SELECTING A CERTAIN COLLEGE

FINDING 12, Reasons noted as "very important" in selecting the college attended included "Good academic reputation," "Offers special programs," "Offers what I want to study," and "Offered financial assistance."

Recommendations: These two findings (Numbers 11 and 12) can be especially helpful in planning recruiting activities. Brochures and printed materials, news releases, TV and radio announcements, speeches, counselors' materials, career information systems, school activity programs (including summer session), and information sent to subject matter teachers, etc., should be designed with the important reasons identified in these two findings in mind. For example, information about career opportunities and challenges, placement and salary, types of activities and responsibilities, career progression, credentials (licensure/registration), etc., should be carefully gathered and disseminated regularly.

HIGHEST DEGREE PLANNED ANYWHERE



FINDING 13, The largest group of college freshmen (nearly 38%) said the baccalaureate level was the highest they planned (in any institution): nearly 30% planned to earn the master's degree, 8% planned the associate and another 8% planned the doctorate level degree. More than 6% planned to earn a professional medical degree and more than 4% a law degree.

HIGHEST DEGREE PLANNED AT COLLEGE ATTENDED

FINDING 14, Nearly 52% of the National freshmen plan to attain the baccalaureate as their highest degree level at the college attended: more than 26% are aspiring to the associate degree, slightly more than 10% the master's level, nearly 7% plan some other degree or level, and nearly 5% do not expect to earn any degree.

Recommendations (13 & 14): It is important for an institution to make known to high school students, counselors and the public both the fields of study and the degree levels offered. (In a previous study, it was disconcerting to learn some high school seniors had identified professions such as dentist, psychologist or doctor of medicine as a career choice, but later in the same questionnaire indicated they did not plan on any graduate level study.) It is recommended that career counselling include qualifications requirements for each profession and that both the needs for graduate study and value of advanced studies be identified to prospective students. Further, the concept of the associate and bachelor's degrees as building blocks to initial career entry be established early, with continuing education throughout one's life recognized as a desireable goal.

PROBABLE FIELD OF STUDY

FINDING 15, The most popular major fields of study of all freshmen (National survey) grouped by general academic categories and percentage choosing each were:

Rank Order	Field	%	Rank Order	Field	%
1st	Business	23.9%	5th	Education	7.7%
2nd	Professional*	14.6%	6th	Social Sciences	6.7%
3rd	Engineering	11.8%	7th	Technical**	5.7%
4th	Arts & Humanities	8.9%	8th	All Others	16.0%
				Undecided	4.7%
					100 %

Majority health & medical related.

**e.g., electronics & mechanical technologies, computer programming, etc.

MOST POPULAR CAREER (OCCUPATION) CHOICES

FINDING 16, The most popular career (occupation) choices of college freshmen were parallel to chosen fields of study. Examples of the most popular individual occupation choices were:

The most popular career choices of freshmen in the National Norm group were:

1. Engineer	10.7%	5. Lawyer	4.1%
2. Business Exec.	10.1%	6. Educator elementary	3.8%
3. Accountant	5.8%	7. Nurse	3.8%
4. Computer programmer or analyst	5.3%	8. Physician	3.5%

The most popular career choices of freshmen in the Indiana sample were:

1. Engineer	10.7%	5. Accountant	5.9%
2. Business Exec.	10.2%	6. Nurse	5.2%
3. Lawyer	9.9%	7. Educator elementary	2.9%
4. Physician	9.7%	8. Computer programmer or analyst	2.8%

Recommendations (Findings 15 & 16): As pointed out earlier the highest rank order in reasons identified for deciding to go to college, chosen by both National and Indiana freshmen was "Able to get a better job." Further, in reasons noted as very important in selecting the college attended, among the most popular were "Offers special program" and "Offers what I want to study." Therefore, it is strongly recommended that in view of these findings and the preceding two which identified the most popular major fields of study and most popular career choices be given very serious consideration in the planning of an institution's offerings. Also, these studies should be continuous in order to keep abreast of students' views and plans. Although some may question a pure "marketing approach," these considerations are undoubtedly critical to maintenance of admission levels for most institutions. (See Attachments for further discussion on marketing philosophies and procedures.)

FINANCIAL AND RELATED MATTERS

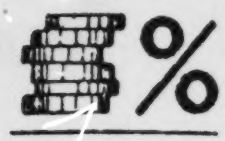
FINDING 17, The following are among the highlights of college freshmen with respect to their first-year's college expenses:

a. Parental: The large majority of college freshmen reported they received financial support from their parents. Nearly one-third of all freshmen do not expect any parental support and another 20% expect less than $500. Slightly more than 21% expect over $2,000.

b. Grants or Scholarships: About two-thirds of all freshmen heard of the Basic Educational Opportunity Grant Program (PELL), nearly half had applied for aid but only 32% qualified.

A small proportion of freshmen expected aid from the Supplemental Education Opportunity Grant, State Scholarship or Grant, or Other College or Private Grant.

c. Loans: Between 15 and 20% of all college freshmen applied and were qualified for financial aid through the Federal Guaranteed Student Loan program. Generally speaking fewer than 10% of the freshmen received National Direct Student Loans, or other types of loans.



d. Work and Savings: Approximately 15% of the freshmen participated in the College Work-Study Grant--most of these earned between $500-999. About the same percentage worked part time in other jobs while in school and only one or two percent worked full time while attending school.

Approximately half of the freshmen had savings earned from summer work: about 23% of all freshmen saved up to $500 and roughly 15% saved up to $1000. About 20% had other savings, with most earning up to about $500.

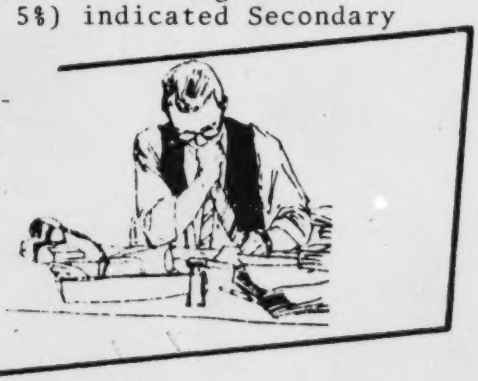
e. Other Support: Financial support from sources other than the above was limited to only a few percent of college freshmen. The largest group was about 5% of the freshmen who were receiving support from Social Security Benefits--and most of these were getting less than $500.

f. Concern about Financing College: More than half of all college freshmen expressed "Some concern" about finances with more than 15% having "Major concern;" fewer than one-third had no concern.

Recommendation: There is no question that financial matters are of critical importance to those planning to attend or who are attending college. It is therefore recommended that in preparing information brochures and printed materials, announcements, counselling activities and public relations activities careful consideration be given to educational expenses, financial aid, and related matters. Potential applicants should be encouraged to contact the institution to discuss and clarify related financial plans and/or problems. These services must be readily available and on-going throughout the students' enrolled years.

CHARACTERISTICS OF PARENTS

FINDING 18, Nearly 30% of all college freshmen indicated their father's occupation as Businessman. The next most common father's occupation is Skilled Worker (11.3% of the National Norms). The third most common was reported to be Engineer. Other choices (each averaging less than 5%) indicated Secondary Teacher, Doctor or Dentist.



The highest education level attained by 30% of the fathers of all college freshmen was high school graduate (some 18% had not completed high school). More than 19% had a college degree and more than 16% had some graduate school or a graduate degree.

The most popular mother's occupation identified was that of a Full-Time Homemaker, approximately 10% of mothers were in mostly Clerical work, another 8% were Businesswomen. Approximately 7% were Elementary Teachers and another 3% were Secondary Teachers. Also about 7% were Nurses.

Approximately 42% of the mothers were high school graduates and about 14% had not completed high school. Nearly 16% had a college degree and 8% had some graduate school or graduate degree. The remainder had some postsecondary education.

Recommendation: The fact that a large proportion of both fathers and mothers of college freshmen had completed high school (only 18% of the fathers and 14% of the mothers had not done so), and because a large proportion of each had some college--or a college degree (nearly 53% of the fathers and 45% of the mothers), information and materials designed specifically for their use to counsel their sons and daughters should be provided. In Chapter III of this report it was shown that high school students state they received more help and information useful in making their career choices and plans from their parents than any other person or source.

ATTITUDES OF COLLEGE FRESHMEN

FINDING 19, There were more than 75 items surveyed related to the attitudes of college freshmen. Only a selected sampling is reported here--without recommendations. (See MR 81-2 for more details--including attitude differences by sex.)

Students' political views

- 60% were "Middle-of-the-Road"
- ∿22% were Liberal
- ∿18% were Conservative.

Students' objectives (essential or very important)

- 73% become an authority in their field
- 65% help others who are in difficulty
- >63% be well off financially
- 63% raise a family
- >54% obtain recognition from colleagues
- 50% develop a philosophy of life
- 50% be successful in own business.

Students' estimate of the future (chances are very good that they will)

- 70% find a job in their preferred field
- 64% get a bachelor's degree
- 54% be satisfied with college
- 41% make at least a "B" average
- 40% get a job to help pay college expenses.

Students' opinions (agrees strongly or somewhat that)

- 93% women should have equality
- 90% the same standards should be used for all
- 87% an energy shortage is causing a depression
- 83% Federal government discourages energy use
- 81% inflation is the country's biggest domestic problem
- 80% government is not controlling pollution
- 71% students should help evaluate faculty
- 60% grading in high school is too easy
- 16% college grades should be abolished.

CHAPTER V

HIGHER EDUCATION AND ECONOMIC GROWTH

This chapter contains two parts. One is a brief article by the author of this report with title same as this chapter heading. The other is an article titled "Better Prospects for Our Ailing Economy" by William Bowen.

HIGHER EDUCATION AND ECONOMIC GROWTH

Dr. J. P. Lisack

The author of this report believes that proper direction and emphasis of Indiana's system of higher education will contribute to its economic growth, as well as help promote greater social equity. The nature and extent of postsecondary education can have a positive influence on the fulfillment of the promise that properly directed and expanded postsecondary education will contribute significantly to meeting personal and societal needs. The author also believes in equity of educational opportunity for all citizens; of all ages, ethnic backgrounds, and both sexes. It is necessary to eliminate barriers to education which result in a less efficient utilization of potential human resources.

Simply expanding postsecondary education of itself as an investment in human capital does not guarantee higher productivity and economic growth per se. The connection between postsecondary education and the State's economy are related to a large extent in the kind and timing of the educational endeavors of its people. To plan and implement effectively requires a joint "triad" effort involving government, the private sector (business and industry), and the educational community. Further, it is essential that accurate and timely information concerning the benefits of education and the current and projected relationship between supply and demand of qualified manpower be made available to all individuals at regular intervals so they may make informed choices.

More and more graduates and adults participating in continuing education are expecting their efforts to result in certain kinds of employment at expected salary levels. Higher education must include within its spectrum of offerings those programs and courses which enable people opportunities to acquire skills and knowledge they desire as well as those which are in demand by employers. The author is convinced that such efforts are legitimate and important for both citizens and higher education in Indiana.

NOTE: Relationship between education level of the work force and productivity.

BETTER PROSPECTS FOR OUR AILING PRODUCTIVITY

By William Bowen*

(Selected extracts)

"The alarm bells are finally beginning to ring," said a witness before the Joint Economic Committee early this year. He was C. Jackson Grayson, chairman of the American Productivty Center in Houston, and he was testifying about the deterioration in the growth of American productivity--a "virtual collapse," as one study put it. He certainly proved to be right about alarm bells. Now, nine months later, they seem to be ringing all the time.

Unfortunately, all the ado about productivity is thoroughly justified. The falloff in productivity growth, says Burton Malkiel, chairman of the economics department at Princeton, is "the most basic sickness of the U.S. economy." Productivity performance is perhaps the best single indicator of an economy's vitality. Rising productivity, after all, is where gains in standards of living come from. Poor productivity growth, moreover, has weakened the ability of the U.S. to compete in world markets, and the implications of continued enfeeblement are exceedingly unpleasant.

The deterioration in American productivity growth since the middle Sixties reversed a trend that had been running since the early years of the nation's history. In a long perspective, smoothing out the cyclical fluctuations that productivity is subject to, it is evident that the rate of productivity growth in the U.S. moved in a generally rising trajectory for nearly 200 years before turning downward in the late Sixties. Data put together by John Kendrick, a leading authority on productivity, indicate that output per worker grew at a rate of 0.5 percent a year over the 1800-1855 span, 1.1 percent in 1855-90, 2.0 percent over the next three decades, and 2.4 percent in 1919-48, despite the downdrag from the Great Depression. From then until the middle Sixties, the trend rate was 3.2 percent. (These figures, and all those having to do with productivity in this article, apply to the private business sector, which excludes government, nonprofit organizations, and households. Productivity growth rates for the entire economy, including government, would be somewhat lower.)

In 1966, the Council of Economic Advisers formally adopted 3.2 percent as the supposedly noninflationary "guidepost" for union wage negotiations. Obsolescence soon overtook it. Following a premonitory stumble in 1967, productivity grew only 0.2 percent in 1969 and then only 0.7 the following year. There was some recovery after that, but productivity growth never did get back to the 1947-66 trend line. Instead, a new and still weaker trend set in after the great leap in OPEC prices in 1973. The rate in 1973-78 was only 1.1 percent.

*FORTUNE Magazine, December 3, 1979, pp. 68-86.

In the Eighties, things will get better. The projections of Alan Greenspan, who is collaborating with FORTUNE on this series about the U.S. economy in the decade ahead, call for a productivity growth rate of 2.1 percent. This moderate recovery will at least relieve worries that stagnation might be just around the corner.

But the prospective recovery, welcome as it will be, will bring us back only to the slowed-down 2.1 percent trend rate of 1966-73, not even close to the old 3.2. And even this blue-gray outlook is predicated on some fairly optimistic assumptions.

* * *

Productivity growth over a span of years is affected by a great many interacting influences, but most of the change from one period to another can be explained in terms of half a dozen factors. One of these is changes in characteristics of the labor force--levels of skill, experience, education.

One particular labor-force characteristic, education, will be a major depressant on productivity growth in the Eighties. Education, in this context, means the average number of years of schooling of the members of the work force. Over the post-war years, the average has increased steadily, and this climb in educational level--here's one thing the experts do agree on--has been an important factor in productivity growth. In the Eighties, the average number of years of schooling will still be rising, but not significantly, so the contribution of education to productivity growth will decline by comparison with 1973-78.

* * *

The most important source of productivity growth, some respected authorities say, is advances in knowledge.

* * *

TABLE OF CONTENTS

ATTACHMENTS

Selected Articles and Extracts

		Page
I.	HIGHER EDUCATION AND JOB PREPARATION *by Carter A. Daniel*	39
II.	MOST COLLEGES SAID TO LAG IN 'MARKETING' *by Lorenzo Middleton*	40
III.	ENROLLMENT, MARKETING, AND RETENTION IN THE COMING DECADE *by David E. Hershey*	41
IV.	COLLEGE OR UNIVERSITY SERVICES TO A COMMUNITY *by Howard Ray Rowland*	49
V.	POSTSECONDARY EDUCATION FOR ADULTS *by Donald R. McNeil*	51
VI.	RETENTION IMPROVEMENT *by Cathy Henderson*	53
VII.	IMPACT OF FEDERAL YOUTH INITIATIVES (e.g., Military Service) *by J. P. Lisack*	56
VIII.	INDIANA'S POPULATION 1970-1980 BY ETHNIC GROUP *by J. P. Lisack*	57
IX.	THE ENROLLMENT BOOM AMONG OLDER AMERICANS: 1 in 3 College Students Is Now Over 25 Years Old *by Jack Magarrell*	61
X.	AS EDUCATION HEADS INTO A "BABY BUST" COMPETITION AND DIVERSITY WILL PREVAIL *by Peter F. Drucker*	64

ATTACHMENT I

HIGHER EDUCATION AND JOB PREPARATION

Extracts from the Point of View article "THE MYOPIC MARKETERS OF ACADEME," by Carter A. Daniel. Reported in The Chronicle of Higher Education, September 1980.

Almost any college would protest if employability of its graduates were said to be its primary goal. "Enhancing discriminating aesthetic judgment," "developing intellectual acuity," "promoting concern for social institutions," and "fostering compassion for fellow beings" are typical stated goals. One can scarcely imagine "finding jobs for the graduates" as an item in so lofty a list. Yet education, broadly conceived, surely should include preparation for employment as much as preparation for perceiving beauty or for being compassionate. In many ways, employability is the most important goal of all, since it is virtually a prerequisite for attaining the other goals.

To those who argue that college should not be a place of "narrow vocationalism," the answer is that nobody requires it to be narrow. Vocationalism can be as broad and creative as the imagination of its designers can make it, and it differs from traditional college education simply in that it has a focus. The airy indifference that colleges traditionally show to the students' need to earn a living--under the guise of being opposed to narrowness--is scandalous. As a poetry professor, I used to decry commercialism and implore my students to follow beauty instead, not acknowledging the fact that I could afford indifference to money only because I had a salary. Had the pursuit of pure beauty been something I had had to finance myself, my attitude could never have been the same.

ATTACHMENT II

MOST COLLEGES SAID TO LAG IN 'MARKETING'*

The "marketing approach" to college admissions has received widespread attention over the past decade, but most institutions of higher learning still do not use the most effective Madison Avenue techniques for attracting students, according to a recent survey.

In a study of the adoption of marketing policies by colleges and universities, James C. Blackburn, admissions director at the University of North Carolina at Asheville, found that "these techniques may not be as widely accepted as the publicity would warrant."

MAJORITY USE NO OVERALL PLAN

Writing in the summer, 1980, issue of the *College Board Review*, Mr. Blackburn said more than half of the 446 colleges responding to his survey were not using a comprehensive marketing plan.

Marketing has been touted since 1969 as an effective way to build and maintain enrollment, he said. By 1978, he added, "marketing in college admissions had pervaded the professional conversations and publications of admissions officers, and more firms had begun to specialize in marketing services for the recruitment programs of colleges and universities."

But few colleges are using such techniques as "advertising research," "demand analysis," "demand forecasting," "pricing," and "marketing plan," despite their proven effectiveness in private industry, Mr. Blackburn said.

More than 70 per cent of the colleges reported that they were using a "marketing concept" that included publicity and "differentiation" (emphasizing their differences from other colleges).

'CUSTOMARY COMPETITIVENESS'

But those techniques "were probably used due to common sense and the customary competitiveness of the college student market," Mr. Blackburn said.

He added that the more popular techniques were reported to be less effective than others that were not widely used.

Some admissions officers appear to be "disenfranchised and helpless" when it comes to such marketing policies as setting the tuition charged by their institutions, Mr. Blackburn said.

He suggested that admissions officers "demand a greater voice in determining institutional costs or ask that other administrators bear in mind the effect of these costs on marketing the institution to potential students."

*As reported in The Chronicle of Higher Education, September 15, 1980, by Lorenzo Middleton. Reprinted with permission. Copyright 1980 by The Chronicle of Higher Education, Inc.

ATTACHMENT III

ENROLLMENT, MARKETING, AND RETENTION IN THE COMING DECADE

by DAVID E. HERSHEY

The 1980's will undoubtedly see a decline in the number of students in the traditional market of 18- to 24-year-olds and a decline of up to 19 percent in the college-going population in some areas. However, enrollment is now affected by much more than the condition of the 18- to 24-year-old market. Because the problem is so complex, a local focus with ongoing research and continued monitoring is an essential part of any enrollment management program. Equally important is increased support for marketing activity and for retention in academic programs.

Increased federal controls, such as legislation for veterans and the handicapped, will also affect enrollment.

Legislation dealing with truth-in-lending, rights of privacy, and financial aid suggests that the government will be involved in curriculum planning, degree plans, and budget development. Education information centers and independent education brokers will inevitably arise. The decade will also see a decline in public confidence, continued emphasis on the vocational-technical area at the expense of the liberal arts, and an increase in the complexity of issues such as rising inflation and declining available resources. In addition to the above, the following will affect enrollment:

Federal support for student financial aid will probably make tax-supported grants more portable across state borders.

Cost effectiveness will increasingly motivate institutions as administrators evaluate the quality of academic programs and determine those to be offered.

Independent colleges and universities will find it increasingly difficult to obtain adequate financial resources to support educational programs.

Unprincipled rivalry may seriously damage institutions and particular programs such as the recruitment of disadvantaged students.

Labor demand for college graduates will improve in the 1980's and 1990's as the supply of college graduates dwindles.

The financial rate of return on higher education investment will rise.

Public community colleges and other institutions in the southern and southwestern United States will fare better than those in other areas because of the "sunbelt phenomenon."

1980 NACUBO Annual Meeting Presentation by David E. Hershey, director of admissions and records at The University of Texas at Austin. EXTRACTS from the NACUBO "Business Officer" Newsmagazine of the National Association of College and University Business Officers, January 1981. (Mr. Hersehy is now with IIT in Chicago, Illinois.)

ENROLLMENT, MARKETING, AND RETENTION
IN THE COMING DECADE (CONTINUED)

Fewer opportunities for innovative programs will arise in an environment of scarce resources.

Interest groups and current consumer desires, not solid academic planning and academic considerations will continue to dominate curriculum choices.

MARKETING

Traditionally, marketing has not been the responsibility of the admissions office. The 1960's featured recruitment, and the 1970's introduced marketing. A successful marketing program must be based on a firm foundation, i.e., institutional goals. To be effective, a marketing program must have total college commitment and must involve many institutional offices in addition to the office of admissions--financial aid, housing, testing and academic advising, development, orientation, and alumni.

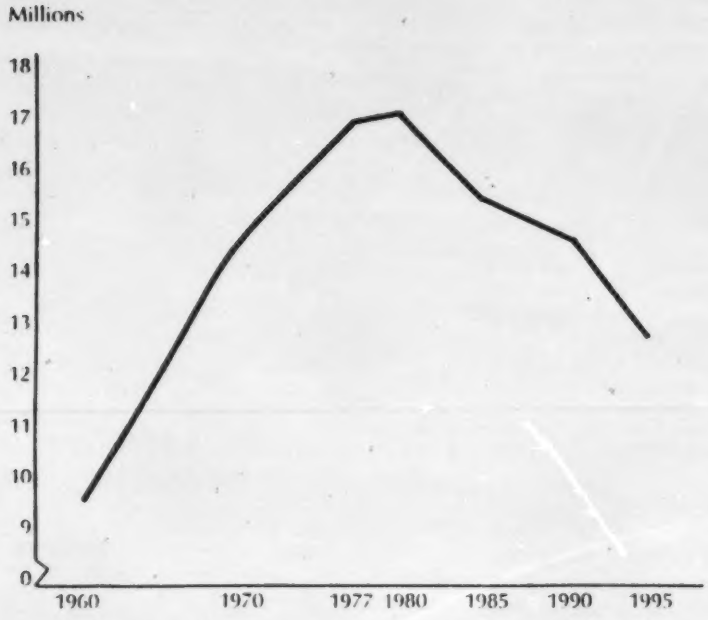
Marketing is directed at satisfying needs and wants through the exchange process--people in today's complex society need education to improve their personal, social, and economic well-being. Marketing in higher education is based first on institutional philosophy and mission; second, on locating appropriate populations; and third, on stimulating, involving, and enrolling those populations and meeting their educational needs.

Market management is the analysis planning, implementation, and control of programs designed to bring about desired exchanges with target markets to achieve organizational objectives. It relies heavily on designing offerings to fit target market needs and desires and using effective pricing, communications, and distribution to inform, motivate, and service the market. Marketing can be viewed in terms of the five I's--Identify, Inform, Interest, Involve, and Invest.

Is the institution able to identify population areas for recruitment? Does an effective communication program inform these populations about the college and what it has to offer? Does a comprehensive system for gathering data show the results of identification and information efforts? (One measure of success is the number of applications generated.) Is the marketing program so organized that it begins with the five I's? Is the applicant involved immediately through orientation, campus visits, communications, housing-financial aid follow up, and alumni contact in the home community?

One of the first principles in marketing is to position the institution within the target population. Positioning relates to the institution's image and usually begins with preadmission activity (informing the target population for example).

Estimates and Projections of the 18-to 21-Year-Old Population in the United States, 1960-1995



1960— 9.550	1982—16.875
1970—14.541	1983—16.499
1977—16.970	1984—15.988
1978—17.105	1985—15.442
1979—17.156	1990—14.506
1980—17.117	1995—12.995
1981—17.018	

Source: U.S. Bureau of the Census. *Projections of the Population of the United States.*

It is important to recognize factors such as institutional reputation that help in the process. Reputation is reinforced by the attitude of currently enrolled students and alumni, by the quality of the faculty, by the educational and coeducational recreational facilities on campus, by the comprehensiveness of the curriculum or the attractiveness of a given curriculum, and by public awareness of other initiatives of the institution, such as a strong program in continuing education. Institutions also promote awareness through the secondary schools and the junior and community colleges through persons who work with students in those institutions.

Additional preadmissions functions related to "Identify" and "Inform" are high school and junior and community college visitations; visibility events that focus on admissions and financial aid; regional meetings and other more sharply focused events, such as those for minority students; and specialized

events, such as those for transfer, veteran, minority, women, and handicapped students. Many activities can be conducted in the summer (for example, workshops co-sponsored by admissions and academic programs such as journalism, math, and music).

Other examples of admissions marketing activity are campus tours, telephone campaigns to contact applicants or referrals, the pen pal program, community alumni projects, interviews, admissions counselor-prospective student correspondence, open houses held by academic departments, and visitation days for high school juniors, scholarship winners, and minority students.

A strong marketing program must have publications records systems, communication systems and techniques, research support, and processes to help prospective students bridge the gap to enrollment.

Some of the essentials are information brochures with career information, information on credit by exam and orientation, campus maps, and literature that explains in detail special programs or interdisciplinary options on campus. Other essentials are extensive files that admissions officers can build via alumni referrals, faculty referrals, or student referrals; a program to match alumni in home communities with the market identified by the admissions office (this can be started with telephone calls and reinforced with social receptions in the home communities); the use of audio-visual techniques, such as tape and slide shows, movie presentations, and posters that characterize the institution; and, importantly, a research and evaluation component supported by a data processing system.

The third "I," or the "Interest" of the target population, is expressed in the number of applications submitted to the college. "Involvement" and "Investment" typically take shape after admission. Programs that help to involve students and their parents are orientation, communication, and campus visits.

Marketing is designed to position the college or university in the mind of the target population so that the individual invests in the institution.

In choosing an institution, prospective students consider academic reputation, preferred field of study, proximity, tuition, size, and the total facility (library, etc.). According to the literature, choice is influenced by parents or other relatives or by friends, by printed materials, by work experience and work-related contact with the institution, or by high school courses, teachers, or guidance counselors.

Effective marketing delivers a picture of institutional resources with maximum impact at low cost.

RETENTION

The dropout rate in American higher education is persistent, serious, and difficult to reduce. Over the past 20 years, the national rate has been roughly 40 percent when measuring the number of students graduating in four years from an original college. This is a significant loss of personnel and institutional and governmental resources. The loss is also to the students themselves, who do not achieve their degree objectives.

It is crucial to be aware that a downward enrollment trend will be aggravated by the decline in retention, and retention will become a more pressing concern because of its direct relationship to enrollment. Institutions cannot afford to lose enrolled students, who sustain financial stability and the breadth and strength of academic programs. Students lost through attrition may not be readily replaced. An increase in retention from 30 to 40 percent is equivalent to an increase in enrollment of approximately 13 percent. A guiding principle when establishing a retention policy is that it is significantly cheaper to retain students than it is to obtain them. Students claim that the following academic factors encourage them to remain in college: progress toward educational goals, academic success, clear program options, and informed academic advising. Social or psychological reasons for staying are a feeling of belonging and high self-esteem. Other reasons include attendance at a four-year college, availability of part-time work, student activity programs, admissions policies, supporting services, and academic advisement.

Reasons for dropping out are also identifiable. According to recent studies, academic boredom is the principal reason. Students also note uninspired teaching, overlap with high school courses, irrelevance, inability to sort out curriculum choices, a feeling of isolation, financial and academic difficulty, and commuting.

These factors imply that students with solid backgrounds and high academic ability are more likely to be retained, as are those who are more certain of their major and of their eventual vocational choice and who have sought assistance in their educational planning. Other implications are that a high dropout rate will usually decrease across the first seven semesters and that students of lower ability tend to drop out early. It is certain that students who lean to early dropout need more attention.

Other observations are that 55 percent of students who drop out plan to get a degree at another institution, that 14 percent of students who drop out do not have an educational plan, that transfers tend to transfer in the last two years, and that students taking longer than a four-year sequence are no longer an abnormal group.

ENROLLMENT, MARKETING, AND RETENTION
IN THE COMING DECADE (CONTINUED)

Retention efforts should include an effective early-alert system, identification of these students with marginal ability and of those who are undecided about college major or vocational interest, and practical measures to identify problems such as transcript requests for other colleges. Institutions should provide career and academic counseling, study the curriculum and measure the effectiveness of instruction, develop a more sensitive exit interview process, and review those services now provided for the transfer student.

A high correlation exists between marketing and retention. Development of an honest and straightforward marketing program based on institutional philosophy and mission helps to support retention, as do unified efforts to compete effectively and the matching of students' educational needs, interests, and abilities with those of the institution.

To develop a retention program, first determine the dropout rate. Second, develop a vehicle to measure student perceptions of the university. Third, establish an exit interview process. Fourth, build an early-alert system. Fifth, form a retention committee or some unit to review the results of the program and share those results with the college community. Both the marketing and retention programs require a team effort.

Establishing student commitment is important for retention, and commitment usually leads to a higher rate of persistence. Student persistence is directly related to the degree to which the student fits academically and socially into the campus system. Students who persist have certain characteristics: 1) they usually have fair to above average academic ability; 2) they have educational aspirations and a commitment to the educational process; and 3) they have parent support, both financially and personally.

Institutions that retain students usually have a selective program of admissions, a high commitment to an academic advising program and support service, and a process and program for counseling departing students on how to return to school.

High-ability students who drop out will usually complete college. It is necessary to reinforce the student's commitment to that goal and take part in designing ways for him to reach it.

The following are common rules for retention and marketing: recruit students with characteristics that fit the mission and program requirements of the college or university; be flexible so that students can change majors easily; involve the campus community; strive for quality in faculty and programs; and sustain a student guidance program from admission through job placement. On all levels the effort to attract students should be matched by the effort to retain them.

ENROLLMENT, MARKETING, AND RETENTION
IN THE COMING DECADE (CONTINUED)

In order to establish an effective enrollment management plan, administrators must acknowledge the interrelation of enrollment, marketing, and retention. Any enrollment increases will come from the participation in higher education of a larger percentage of the population (a function of marketing) and from more effective retention programs. Finding solutions demands total institutional commitment. Success depends on an alert and aggressive management team armed with a clear statement of goals and objectives and prepared to carry out a systematic allocation of institutional resources. The enrollment problem is too serious and too complex to be handled in any other way.

ATTACHMENT IV

COLLEGE OR UNIVERSITY SERVICES TO A COMMUNITY

Extracts from article "In Hard Times, Colleges Need Good Neighbors," by Howard Ray Rowland. Reported in The Chronicle of Higher Education, 29 September 1980. Reprinted with permission. Copyright 1980 by The Chronicle of Higher Education, Inc.

Lifelong learning is seen by many as the future for higher education in America. This means that colleges and universities will be used by non-traditional students for occupational training and by professionals to keep current in their fields. It also means that those institutions will meet people where they are, to provide the educational services they need.

That is the good news. The bad news is a decline in the enrollment of traditional students combined with a reduction in operating budgets, continued inflation, a sluggish economy, and energy problems. Campuses must anticipate faculty and staff cuts, slow growth or no growth in programs and facilities, more competition for students, less demand for student housing and classroom space, more difficulty in placing graduates, and more need for energy conservation.

These forecasts mean colleges and universities had better re-examine their programs, services, and facilities in search of hidden assets among the obvious liabilities. The creative institution will find ways to adapt to change by linking community needs to campus resources.

There are four fundamental ways a college or university can and should be involved with its community, regardless of size: as a source of ideas and information, as a neighbor and citizen, as a service agency, and as a model or example.

In re-examining goals, the institution must choose areas of community participation within its ability to serve.

Implementing an effective community-relations program for the difficult years ahead requires an enlightened attitude, a definite policy, thorough knowledge of the community, positive behavior, effective two-way communication, and continuing evaluation.

The challenge is to forge a new relationship between the campus and the community that will be mutually supportive.

There are many creative, specific ways in which institutions can involve themselves in community services to strengthen campus-community relationships. Here are some ideas worth considering:

Colleges and universities can become research and information centers for their communities to help solve practical problems and improve the quality of life. All communities can use assistance in such areas as crime control, neighborhood preservation, physical fitness, family counseling, consumer protection, environmental quality, energy conservation, small-business management, home improvement, public transportation, and health-care delivery systems.

More courses and services can be offered evenings and weekends to benefit adults who are employed full time. Institutions can add child-care centers to assist working adults with children. There must be a willingness to tailor programs to meet specific needs of individuals, groups, and businesses and to deliver those programs at times and places convenient to the participants.

By the year 2000, home information centers will be commonplace. Video-computer technology will enable the viewer not only to select from a vast assortment of programming but also to be a participant. Few colleges and universities have recognized or explored the possibilities of extending their course offerings directly into homes through video-computer systems.

Most campus buildings are under-utilized, particularly on weekends and during the summer months. As more families stay at home instead of taking vacation trips in the summer, nearby campus programs and activities could attract more community residents than before. The high cost of living makes the neighboring college or university appealing as a source of relatively inexpensive entertainment, recreation, and informal--as well as formal--education.

The college or university that becomes totally engaged in community service faces risks--of failure, of losing credibility, of being victimized by contending power interests, of discovering that cherished beliefs and traditions are irrelevant and unreliable. The greater risk, however, lies in relying on the expectation that the institution will be supported by a society that has found it unprepared or unwilling to meet existing needs.

ATTACHMENT V

POSTSECONDARY EDUCATION FOR ADULTS

Extracts from the Point of View article "America's Adult Students Need an Open University," by Donald R. McNeil. Reported in The Chronicle of Higher Education, 5 May 1980.

Despite the best efforts of American higher education, millions of adults face formidable barriers in their pursuit of formal instruction. The barriers differ, depending on the area, the economic level of the inhabitants, and the location and character of the surrounding institutions; but they exist--mostly because of the attitudes, perceptions, leadership, and commitment (or lack thereof) of the institutions themselves.

There is a need for an addition to the education establishment, and there are four significant factors in American life today that have created that need:

The first is the ongoing revolution in technology. The satellite, cable and broadcast TV, the videodisc, computers, and fiber optics are among the advances that are changing teaching functions and powers at a rate that has many educators in a state of "future shock." We have responded with a good deal of fine-sounding rhetoric about technology and the adult learner, yet technology is not being incorporated into higher education's strategy, structure, programs, or operations.

The second factor is in the nature of enrollment. Steady-state or declining enrollment and the addition of different age groups from different backgrounds are challenging the established mission and goals of traditional institutions.

The third is inflation. It has created financial problems and at the same time has forced institutions to cut back in the very areas in which expansion might help them solve those problems--namely, new programs aimed at new constituencies in different places at different times.

Energy is the fourth factor. Travel--even across town--will become increasingly restricted, and while the old maxim that almost everyone in the United States is within 25 miles of a campus may still hold, it will be affected by the new perception in an oil-conscious America that a round trip of up to 50 miles is no small matter.

In addition, ours is still a mobile population. Twenty per cent of all American families move every year; the average family moves 13 times in a lifetime, or once every 5 years. Such mobility, coupled with differing institutional policies, makes it difficult for the mobile adult learner to progress steadily toward a degree.

Under those conditions, how will the adult who--for a variety of reasons--may not fit into the narrow confines of the present system of higher education be served? And when? And where?

Demographic barriers (age, sex, income level, and geographic location) are not the only ones. There are such institutional barriers as residency requirements for part-time students, restrictions on the number of credits allowed for off-campus or mediated instruction, and limited acceptance of credits earned by examinations, experience, or non-resident study.

Moreover, appropriate courses often are simply not available at the time and in the place convenient to many adult students; when we add financial barriers and bureaucratic indifference at the institutions, we end by curbing the education appetite of many adult learners.

The plight of the adult learner, especially the part-time, credit-oriented student, is evidence that the present system needs to be supplemented by an "open university" to meet their specific needs.

Such a university would serve as a credit bank for adult students throughout the country, with a system for aggregating all types of credit: credit earned by competency-based testing, correspondence courses, independent study, life experience, or any other acceptable means, in addition to traditional classroom credit. It would be comprehensive in scope and method. It would utilize all the theories and practices that are now incorporated, piecemeal, in college and university outreach programs. It would make use of technology.

* * *

The following was extracted from a brochure entitled "An Open University for America: Responding to the Challenge of the Eighties," issued by Donald R. McNeil, President, University of Mid-America, P. O. Box 82006, Lincoln, Nebraska 68501.

Changes in America's economic and social structure present a growing challenge to its citizens and institutions. The value of a college education--to the individual and to society--remains great, yet millions of Americans are excluded from higher education.

On the one hand, problems created by inflation and other fiscal constraints are forcing colleges and universities to cut back services in key academic areas; on the other hand, energy shortages, increasing mobility, demands on personal time, and other economic and social factors require new and more flexible educational opportunities for our citizens, particularly adults.

Clearly, it is time for America to supplement its system of higher education with a new entity--a nationwide open university--which would provide high-quality educational options at a cost both the individual and society can afford.

* * *

NOTE: This particular article is inserted to stimulate thoughts and plans to better serve more adults, rather than advocating the Open University as a solution to these problems. Probably more colleges and universities could expand their services to more adults if they addressed the "barriers adults face in their pursuit of formal instruction."

ATTACHMENT VI

RETENTION IMPROVEMENT*

INTRODUCTION For the past several years, many college administrators have been preoccupied with the predicted decline in the number of traditional college-age youth. They fear that, as the post-World-War-II baby boom ends, enrollments will taper off and then steadily decline throughout the next fifteen years. Consequently, colleges are marketing their services to a broad segment of the population: programs for retired citizens, women re-entering the labor market, and individuals seeking retraining for mid-career changes are commonplace. But in their search for students to fill classroom seats, college administrators often overlook an obvious pool: those students who are currently enrolled in their institutions.

The magnitude of the attrition phenomenon is frequently underestimated. Using one standard measure of degree completion rates, the progress of ten entering freshmen can be summarized as follows:

four will graduate from that institution within four years,
one will remain and graduate after the initial four years,
two will transfer and graduate,
two will transfer and not graduate, and
one will drop out and not re-enroll at any school.

This definition of retention--tracking the progress from entry to degree completion--is still applicable to many students, particularly those starting college immediately after high school and enrolling on a full-time basis. However, for other types of students the measurement of attrition--or the evidence of interrupting one's studies--is closely tied to the intended goals of the individual students. Consequently, many combinations of enrollment/employment/leisure are emerging as socially acceptable patterns. Moreover, it is important to remember that in many cases, leaving college, either temporarily or permanently, is the proper choice for some students. Health problems or family responsibilities may demand the student's immediate attention, or educational goals may be met before receiving a degree.

Institutional studies of retention rates can serve as important tools in developing an enrollment strategy. Emphasis on marketing techniques may have been adequate to insure a stable supply of applicants during the seventies when the pool of recent high school graduates was still increasing, but a campuswide approach to improve both marketing and retention strategies while preserving academic quality will be required in the eighties.

One can begin a retention survey at almost any time and by polling almost any group of students. But if college officials are serious about determining what is currently contributing to their retention patterns, a comprehensive approach is advisable. From surveying the following groups, administrators can begin to piece together what is working in their favor and what areas need improvement:

*Taken from American Council on Education, Policy Brief, by Cathy Henderson, Research Associate. December 1980.

persons who are accepted but never enroll,
students who drop out early in their freshman year,
students who leave later in their freshman year,
sophomores who leave toward the end of their second year,
upperclassmen who have remained enrolled,
students who have transferred in or out,
students who have stopped out and later re-enrolled, and
recent graduates.

It is obviously not necessary to poll all these individuals at once, and sample surveys are usually sufficient. Following up an entering class of students several times over a period of years can reveal patterns of stopping out versus dropping out that can only be adequately measured through longitudinal analysis. From a series of surveys such as those suggested, administrators will be able to distinguish between students who have left for academic reasons and those whose departure may be largely determined by non-academic considerations. Knowing the difference between these two types of withdrawals will help to establish realistic goals for improving retention rates for different groups of students.

RETENTION TACTICS From a cross section of institutional case studies, several plans which presently are working on diverse campuses include:

1. more thoughtful initial placements of freshmen roommates through the use of student preference questionnaires.
2. a rolling orientation program for freshmen during the summer prior to enrollment. This has worked particularly well for large institutions and has permitted groups of 50-100 students to become acquainted with each other and the institution.
3. a program to encourage students who are considering leaving temporarily to develop a structured leave of absence combining their immediate goal with the prospect of receiving academic credit for an independent project undertaken while off-campus.
4. if possible, residence in a dormitory during the initial year to improve the chances of remaining enrolled at the institution.
5. early involvement in campus activities during the freshman year. Part-time employment (up to 20 hours per week), particularly through the College Work-Study program, apparently improves retention rates.
6. cooperative education programs where students alternate periods of classes with employment and internships to increase satisfaction among students who are hoping to graduate with more than just theoretical knowledge.
7. easy access to and clear descriptions of sources of financial aid available from federal, state, institutional, and private sources to help meet expected expenses. From the campus publications, a student must easily be able to translate from the institution's "sticker price" down to the "net price" for tuition, fees, and other reasonable student charges.

8. honors classes for the top 10 percent of the freshman class to recognize and encourage scholarship.
9. analysis of attrition rates by departmental level. Often attrition can appear quite low among all undergraduates when students in a handful of majors may be experiencing difficulty.
10. efforts to better publicize on-campus jobs to commuter students as well as residential students.
11. expanded access to lockers for commuter students allowing them to store more than books and therefore encouraging them to use the athletic facilities.
12. an emergency vehicle to be used to combat locked cars, dead batteries, flat tires, or other aggravations which typically surface after a 10:00 p.m. class.

ATTACHMENT VII

IMPACT OF FEDERAL YOUTH INITIATIVES (E.G., MILITARY SERVICE)

College administrators are currently competing for the high school graduate population, and that interest will intensify during the next ten years when the number of young people will shrink. In addition to higher education's interest, federal officials have been discussing measures to upgrade the quantity and quality of the All-Volunteer Force, maintain military registration, revive the draft, and expand national service programs. How these federal initiatives may affect higher education's plans for the 1980's is uncertain.

In order to maintain an active duty peacetime force of approximately 2 million persons, the Department of Defense will annually require 1 in every 10 newly eligible young persons during the next decade. For example, this might translate to 18.5 percent of 18-year-old men and 2.5 percent of 18-year-old women each year between now and 1990. (The actual number of persons needed to be screened by the military would run about one-third higher because of mental and physical rejection rates.) Since 1973, the U.S. has been using volunteers exclusively to meet its military objectives. However, the recruiting outlook for a successful All-Volunteer Force is clouded by problems of inadequate compensation, poor educational incentives, high attrition rates among mid-career personnel, a physician shortage, an overall lack of skills among new recruits, and decreasing numbers of the youth population. Recent federal efforts to improve the quality and quantity of new recruits include selective pay raises, an increased proportion of women accepted, upgraded professional recruiters, an improved Veterans' Educational Assistance Program, and expanded educational incentives for persons serving in critical skill areas. Figures for 1980 suggest that the Department of Defense is currently close to or exceeding its enlistment goals in terms of quantity but is still not attracting enough trained personnel. The uncertain U.S. economic situation undoubtedly has contributed to the upsurge in military enlistments.

SUMMARY On balance, higher education enrollments are not seriously challenged by current initiatives to upgrade recruiting efforts, to register youths for possible military service, and to increase voluntary service opportunities. However, during the next decade college officials must closely monitor federal youth initiatives which might affect the college participation rate of recent high school graduates.

Dr. J. P. Lisack

PURDUE UNIVERSITY - SCHOOL OF TECHNOLOGY
OFFICE OF MANPOWER STUDIES

MANPOWER INFORMATION 18 MAY 1981
TID-BIT NO. 81-2 DR. J. P. LISACK, DIRECTOR

INDIANA'S POPULATION: 1970-1980 BY ETHNIC GROUP - 1980*

The population of the State of Indiana in 1970 was 5,195,392 having grown some 11.4% since 1960; in 1970 Black persons comprised 7.2% of the State population. By 1980, the State's population grew to 5,490,179, a 5.7% growth; in 1980 Black persons comprised 7.6% of the population.

The population has changed significantly in the major cities in Indiana. For example: an increase of over 19% was realized in Bloomington and 14.5% in Columbus; it increased 11.5% or more in Mishawaka and Muncie. Large decreases were suffered by East Chicago (-15.3%) as well as Gary, Hammond, and Terre Haute all over 13%. South Bend also had a notable decrease (-12.6%). The highest proportion of Blacks was 70.8% in Gary, followed by East Chicago at 29.7%, Indianapolis 21.8%, Michigan City at 21%, and South Bend at 18.3%. The lowest proportions of Blacks are found in Mishawaka (1.1%), Lafayette at 1.6%, and Columbus at 2.6%. (See Table 1.)

*****

There have also been significant changes in the population of counties in Indiana during the last decade. Eleven counties increased more than 25% including: Hamilton, +51.1%; Warrick, +48.3%; Porter, +37.5%; Brown, +36.7%; Harrison, +33.6%; Owen, +30.2%; Hendricks, +29.3%; Jasper and Newton, +27.9%; Johnson, +26.3%; and Hancock, 25.2%. It is significant that most of these counties are relatively small in population--only Porter has more than 100,000 people.

Four of the five largest counties in the State suffered population losses. These were Marion, -3.6%; Lake, -4.3%; St. Joseph, -1.3%; and Vanderburgh, -0.7%;--Allen County (third largest) was the exception, it grew 4.9%.

Black persons were largely concentrated in five counties. In general, these counties had the largest populations and contained at least one major city; Lake County was highest at 24.1% Blacks, followed by Marion at 20.3%--then came Allen at 9%, St. Joseph at 8.9% and Vanderburgh at 7.1%. (The State average was 7.6% Black.)

See Table 1 on next page for Population of Major Cities by Ethnic Groups,
See Table 2 for Five Largest Counties in Indiana with Percent Blacks, and
See Table 3 for Population Comparisons 1978-1980 and Persons By Race: State and County.

* *Source: 1980 Census of Population and Housing in Indiana. PHC80-V-16. U.S. Dept. of Commerce, Bureau of the Census, issued March 1981.*

ATTACHMENT VIII (continued)

TABLE 1
INDIANA'S POPULATION OF MAJOR CITIES 1970-1980, AND BY ETHNIC GROUP FOR 1980

State and Major Cities	Persons 1980	Persons 1970	Percent Change, 1970 to 1980	By Race - 1980 White	Black	Other	% Black
The State	5,490,179	5,195,392	5.7%	5,004,567	414,732	70,880	7.6%
Cities							
Anderson	64,695	70,787	-8.6%	55,414	8,861	420	13.7%
Bloomington	51,646	43,262	19.4%	47,235	2,186	2,225	4.2%
Columbus	30,292	26,457	14.5%	29,091	774	427	2.6%
East Chicago	39,786	46,982	-15.3%	19,036	11,802	8,948	29.7%
Elkhart	41,305	43,152	-4.3%	35,532	5,186	587	12.6%
Evansville	130,496	138,764	-6.0%	117,917	11,522	1,057	8.8%
Fort Wayne	172,196	178,269	-3.4%	143,344	25,063	3,789	14.6%
Gary	151,953	175,415	-13.4%	38,232	107,644	6,077	70.8%
Hammond	93,714	107,983	-13.2%	83,853	5,995	3,866	6.4%
Indianapolis	700,807	736,856	-4.9%	540,294	152,626	7,887	21.8%
Kokomo	47,808	44,042	8.6%	43,301	3,877	630	8.1%
Lafayette	43,011	44,955	-4.3%	41,780	701	530	1.6%
Marion	35,874	39,607	-9.4%	30,024	5,101	749	14.2%
Michigan City	36,850	39,369	-6.4%	28,644	7,734	472	21.0%
Mishawaka	40,224	36,060	11.5%	39,393	434	397	1.1%
Muncie	77,216	69,082	11.8%	69,089	7,369	758	9.5%
New Albany	37,103	38,402	-3.4%	34,995	1,927	181	5.2%
Richmond	41,349	43,999	-6.0%	37,258	3,699	392	8.9%
South Bend	109,727	125,580	-12.6%	87,236	20,066	2,425	18.3%
Terre Haute	61,125	70,335	-13.1%	55,077	5,192	856	8.5%

TABLE 2
FIVE LARGEST COUNTIES IN INDIANA
WITH POPULATION CHANGE 1970-80; % BLACKS IN 1980

Rank Order	County	1980 Population	% Change 1970-80	% Black 1980
1.	Marion	765,233	-3.6%	20.3%
2.	Lake	522,965	-4.3%	24.1%
3.	Allen	294,335	+4.9%	9.0%
4.	St. Joseph	241,617	-1.3%	8.9%
5.	Vanderburgh	167,515	-0.7%	7.1%
	(STATE AVERAGES)		+5.7%	7.6%

ATTACHMENT VIII (continued)
TABLE 3
POPULATION COMPARISONS 1978-1980 AND
PERSONS BY RACE: STATE AND COUNTY

County	Persons 1980	Persons 1970	Percent Change, 1970 to 1980	By Race - 1980 White	Black	Other	% Black
The State	5,490,179	5,195,392	5.7%	5,004,567	414,732	70,880	7.6%
Adams	29,619	26,871	10.2%	29,100	7	512	0.0%
Allen	294,335	280,455	4.9%	262,908	26,396	5,031	9.0%
Bartholomew	65,088	57,022	14.1%	63,477	974	637	1.5%
Benton	10,218	11,262	-9.3%	10,174	11	33	0.1%
Blackford	15,570	15,888	-2.0%	15,524	4	42	0.0%
Boone	36,446	30,870	18.1%	36,227	45	174	0.1%
Brown	12,377	9,057	36.7%	12,287	18	72	0.1%
Carroll	19,722	17,734	11.2%	19,630	17	75	0.1%
Cass	40,936	40,456	1.2%	40,449	318	169	0.8%
Clark	88,838	75,876	17.1%	83,869	4,317	652	4.9%
Clay	24,862	23,933	3.9%	24,713	90	59	0.4%
Clinton	31,545	30,547	3.3%	31,344	13	188	0.0%
Crawford	9,820	8,033	22.2%	9,757	13	50	0.1%
Daviess	27,836	26,602	4.6%	27,649	124	63	0.4%
Dearborn	34,291	29,430	16.5%	33,930	227	134	0.7%
Decatur	23,841	22,738	4.9%	23,749	2	90	0.0%
DeKalb	33,606	30,837	9.0%	33,374	28	204	0.1%
Delaware	128,587	129,219	-0.5%	120,018	7,587	982	5.9%
Dubois	34,238	30,934	10.7%	34,129	8	101	0.0%
Elkhart	137,330	126,529	8.5%	129,971	5,761	1,598	4.2%
Fayette	28,272	26,216	7.8%	27,691	459	122	1.6%
Floyd	61,169	55,622	10.0%	58,736	2,182	251	3.6%
Fountain	19,033	18,257	4.3%	18,958	4	71	0.0%
Franklin	19,612	16,943	15.8%	19,569	2	41	0.0%
Fulton	19,335	16,984	13.8%	19,072	156	107	0.8%
Gibson	33,156	30,444	8.9%	32,427	618	111	1.9%
Grant	80,934	83,955	-3.6%	74,581	5,264	1,089	6.5%
Greene	30,416	26,894	13.1%	30,293	10	113	0.0%
Hamilton	82,381	54,532	51.1%	81,375	365	641	0.4%
Hancock	43,939	35,096	25.2%	43,636	43	260	0.1%
Harrison	27,276	20,423	33.6%	27,059	145	72	0.5%
Hendricks	69,804	53,974	29.3%	69,117	353	334	0.5%
Henry	53,336	52,603	1.4%	52,649	496	191	0.9%
Howard	86,896	83,198	4.4%	81,711	4,279	906	4.9%
Huntington	35,596	34,970	1.8%	35,269	40	287	0.1%
Jackson	36,523	33,187	10.1%	36,217	129	177	0.4%
Jasper	26,138	20,429	27.9%	25,919	55	164	0.2%
Jay	23,239	23,575	-1.4%	23,085	48	106	0.2%
Jefferson	30,419	27,006	12.6%	29,844	396	179	1.3%
Jennings	22,854	19,454	17.5%	22,588	197	69	0.9%
Johnson	77,240	61,138	26.3%	75,912	833	495	1.1%
Knox	41,838	41,546	0.7%	41,107	445	286	1.1%
Kosciusko	59,555	48,127	23.7%	58,719	212	624	0.4%
Lagrange	25,550	20,890	22.3%	25,440	3	107	0.0%
Lake	522,965	546,253	-4.3%	373,428	126,051	23,486	24.1%
LaPorte	108,632	105,342	3.1%	98,899	8,662	1,071	8.0%
Lawrence	42,472	38,038	11.7%	42,224	115	133	0.3%
Madison	139,336	138,522	0.6%	128,913	9,652	771	6.9%

TABLE 3
POPULATION COMPARISONS 1978-1980 AND
PERSONS BY RACE: STATE AND COUNTY (CONTINUED)

County	Persons 1980	Persons 1970	Percent Change, 1970 to 1980	By Race - 1980 White	Black	Other	% Black
Marion	765,233	793,769	-3.6%	601,092	155,310	8,831	20.3%
Marshall	39,155	34,986	11.9%	38,769	61	325	0.2%
Martin	11,001	10,969	0.3%	10,930	7	64	0.1%
Miami	39,820	39,246	1.5%	37,886	1,087	847	2.7%
Monroe	98,387	85,221	15.4%	93,296	2,513	2,578	2.6%
Montgomery	35,501	33,930	4.6%	35,211	154	136	0.4%
Morgan	51,999	44,176	17.7%	51,845	8	146	0.0%
Newton	14,844	11,606	27.9%	14,743	11	90	0.1%
Noble	35,443	31,382	12.9%	35,211	28	204	0.1%
Ohio	5,114	4,289	19.2%	5,053	48	13	0.9%
Orange	18,677	16,968	10.1%	18,376	227	74	1.2%
Owen	15,840	12,163	30.2%	15,724	38	78	0.2%
Parke	16,372	14,628	11.9%	16,270	41	61	0.3%
Perry	19,346	19,075	1.4%	19,272	12	62	0.1%
Pike	13,465	12,281	9.6%	13,395	12	58	0.1%
Porter	119,816	87,114	37.5%	117,846	299	1,671	0.2%
Posey	26,414	21,740	21.5%	25,989	302	123	1.1%
Pulaski	13,258	12,534	5.8%	13,155	57	46	0.4%
Putnam	29,163	26,932	8.3%	28,579	434	150	1.5%
Randolph	29,997	28,915	3.7%	29,781	69	147	0.2%
Ripley	24,398	21,138	15.4%	24,308	7	83	0.0%
Rush	19,604	20,352	-3.7%	19,384	164	56	0.8%
St. Joseph	241,617	244,827	-1.3%	216,070	21,604	3,943	8.9%
Scott	20,422	17,144	19.1%	20,296	2	124	0.0%
Shelby	39,887	37,797	5.5%	39,412	301	174	0.8%
Spencer	19,361	17,134	13.0%	19,174	118	69	0.6%
Starke	21,997	19,280	14.1%	21,808	32	157	0.1%
Steuben	24,694	20,159	22.5%	24,351	65	278	0.3%
Sullivan	21,107	19,889	6.1%	21,034	22	51	0.1%
Switzerland	7,153	6,306	13.4%	7,114	14	25	0.2%
Tippecanoe	121,702	109,378	11.3%	116,918	2,040	2,744	1.7%
Tipton	16,819	16,650	1.0%	16,723	2	94	0.0%
Union	6,860	6,582	4.2%	6,816	21	23	0.3%
Vanderburgh	167,515	168,772	-0.7%	154,335	11,934	1,246	7.1%
Vermillion	18,229	16,793	8.6%	18,144	13	72	0.1%
Vigo	112,385	114,528	-1.9%	104,799	6,170	1,416	5.5%
Wabash	36,640	35,553	3.1%	36,154	147	339	0.4%
Warren	8,976	8,705	3.1%	8,949	3	24	0.0%
Warrick	41,474	27,972	48.3%	40,971	295	208	0.7%
Washington	21,932	19,278	13.8%	21,870	7	55	0.0%
Wayne	76,058	79,109	-3.9%	71,697	3,856	505	5.1%
Wells	25,401	23,821	6.6%	25,268	4	129	0.0%
White	23,867	20,995	13.7%	23,759	10	98	0.0%
Whitley	26,215	23,395	12.1%	26,073	9	133	0.0%

THE ENROLLMENT BOOM AMONG OLDER AMERICANS: 1 IN 3 COLLEGE STUDENTS IS NOW OVER 25 YEARS OLD*

The U.S. Census Bureau says that if rates of attendance hold up, the increased number of students over 25 may offset much of the effect of the next decade's decline in the 18-to-24-year-old population

By Jack Magarrell

Colleges and universities have increased their enrollment of students over 35 years old by 36.8 per cent in five years, the U.S. Census Bureau reports.

Enrollment rates also are rising in another group of Americans beyond the traditional college age--those from 25 through 34. Nearly one-sixth of the people in that age group are enrolled in some kind of educational institution, compared with about one-eighth 10 years ago, the Census Bureau estimates.

As a result, more than a third of all college students now are 25 or older.

During the five-year period, 1974-79, enrollment of students over 25 grew by about 26 per cent, while the enrollment of students under 25 rose by about 10 per cent, the Census Bureau reports.

OFFSETTING LOSS OF 18-YEAR-OLDS

Institutions concerned about maintaining their enrollment levels are looking to the older groups to offset, at least partially, a decline in the population of 18-year-olds during the 1980's.

"If the enrollment rate of persons 25 years old and over remains at its present level," the Census Bureau's report says, "the number enrolled will increase because the population 25 and over will grow."

Applying 1979 enrollment rates to the projected 1990 population, the Census Bureau estimates that enrollment of students 25 through 64 years old will increase by 939,000. At the same time, enrollment of those 14 through 24 would decline by 803,000.

The rising enrollment of older students probably will not completely offset losses of younger students, the report notes, because older students are more likely to enroll part time.

At present, 72 per cent of students 25 and over attend college part time, compared with 17 per cent of younger students.

If that pattern continues, the Census Bureau estimates that the increase in enrollment of older students will offset about 70 per cent of the loss in full-time equivalent students.

ROLE OF OLDER WOMEN

The bureau's figures confirm the dominant role that older women have played in maintaining college enrollment in recent years. A majority of the older students are women, a large proportion of them enrolled on a part-time basis.

The number of women over 35 enrolled in college increased by 66.8 per cent between 1974 and 1979. In the same five years, the number of women 25 through 34 enrolled in college increased by 58.7 per cent.

*SOURCE: *The Chronicle of Higher Education*, May 4, 1981, Vol. XXII, No. 11.
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ATTACHMENT IX CONTINUED

THE ENROLLMENT BOOM AMONG OLDER AMERICANS:
1 IN 3 COLLEGE STUDENTS IS NOW OVER 25 YEARS OLD (CONTINUED)

Women outnumbered men, 914,000 to 487,000, among students in the 35-and-over age group in the fall of 1979. Only 147,000 of the older women and 81,000 of the older men were full-time students.

Among blacks, the Census Bureau says, 91,000 women and 64,000 men over 35 were enrolled in college.

For both whites and nonwhites the number of students over 35 amounted to about 1.5 per cent of the total population in that age group.

The enrollment rate for men between the ages of 25 and 34 has declined slightly, from 17.3 per cent in 1969 to 16.4 per cent in 1979. In that period, the enrollment rate for women in the same age group rose from 8.4 per cent to 15.5 per cent.

Among blacks, the enrollment rate in the 25-through-34 age group increased from 7.7 per cent in 1969 to 14.7 in 1979.

Data on younger students in the Census Bureau's report show the extent to which enrollment rates vary with family income.

Among the high-school graduates 18 through 24 years old who are financially dependent on their families, the proportion enrolled in college ranges from 30.8 per cent for those whose family income is under $10,000 a year to 53.5 per cent for those whose income is $25,000 or more.

DIFFERENCE IN MEDIAN INCOME

Also in that group, 44.7 per cent of the whites were enrolled in college, compared with 34.8 per cent of the blacks.

A comparison of enrollment rates for blacks and whites at the same income levels, however, showed no significant differences, the report says, but there were fewer blacks in the higher income levels, which contributed to the blacks' lower overall enrollment rate.

The median family income of dependent college students in the 18-through-24 age group was over $25,000 for whites and $13,077 for blacks.

Data on college enrollment by age, sex, race, and family income were obtained in interviews with members of 54,000 households in 614 sample areas throughout the country and published in the Census Bureau's *Current Population Reports*, Series P-20, No. 360, "School Enrollment--Social and Economic Characteristics of Students: October 1979."

Projections Show Increase in Enrollment of Older Students by 1990

Age group	Estimated enrollment in 1979	Proportion of population in 1979	Projected population in 1990	Projected enrollment in 1990	5-year change
14 through 17	311,000	1.9%	12,770,000	243,000	- 68,000
18 and 19	2,844,000	34.6%	7,195,000	2,489,000	-355,000
20 and 21	2,353,000	29.1%	7,311,000	2,128,000	-225,000
22 through 24	1,794,000	15.4%	10,641,000	1,639,000	-155,000
Total, 14 through 24	**7,302,000**	**16.6%**	**37,917,000**	**6,499,000**	**-803,000**
25 through 29	1,679,000	9.3%	20,169,000	1,876,000	+197,000
30 through 34	996,000	6.1%	20,917,000	1,276,000	+280,000
35 through 39	566,000	4.2%	19,261,000	809,000	+243,000
40 through 44	330,000	2.9%	17,331,000	503,000	+173,000
45 through 49	223,000	2.0%	13,889,000	278,000	+ 55,000
50 through 54	139,000	1.2%	11,422,000	137,000	- 2,000
55 through 64	111,000	0.5%	20,776,000	104,000	- 7,000
Total, 25 through 64	**4,044,000**	**3.2%**	**123,765,000**	**4,983,000**	**+939,000**
Total, 14 through 64	**11,346,000**	**7.7%**	**161,682,000**	**11,482,000**	**+136,000**

5-Year Enrollment Trends Among Older Students

Population aged 25 through 34

	1979			Change from 1974		
	Men	Women	Total	Men	Women	Total
Total	16,715,000	17,674,000	34,389,000	+18.3%	+17.2%	+17.7%
In college	1,356,000	1,319,000	2,675,000	- 1.1%	+58.7%	+21.5%
Full time	558,000	364,000	920,000	- 0.7%	+41.6%	+12.5%
Part time	798,000	955,000	1,755,000	- 1.4%	+66.4%	+26.8%
Freshmen	160,000	281,000	441,000	-15.8%	+59.7%	+20.5%
Sophomores	193,000	212,000	405,000	-18.2%	+86.0%	+15.7%
Juniors	203,000	146,000	349,000	+19.4%	+43.1%	+28.3%
Seniors	193,000	138,000	331,000	- 7.7%	+84.0%	+16.5%
Graduates	606,000	543,000	1,149,000	+ 6.9%	+48.8%	+23.3%
2-year colleges	288,000	375,000	664,000	-16.5%	+70.5%	+17.5%
Full time	102,000	81,000	185,000	+ 3.0%	+52.8%	+21.7%
Part time	186,000	294,000	479,000	-24.4%	+76.0%	+16.0%
4-year colleges	460,000	402,000	862,000	0.0%	+62.8%	+21.9%
Full time	203,000	136,000	340,000	-14.0%	+33.3%	+ 1.2%
Part time	257,000	266,000	522,000	+14.7%	+83.4%	+40.7%

Population aged 35 and over

	1979			Change from 1974		
	Men	Women	Total	Men	Women	Total
Total	42,437,000	49,427,000	91,864,000	+ 6.5%	+ 6.6%	+ 6.6%
In college	487,000	914,000	1,402,000	+ 2.3%	+66.8%	+36.8%
Full time †	81,000	147,000	228,000	-22.9%	+42.7%	+ 9.1%
Part time †	402,000	764,000	1,166,000	+ 9.2%	+72.5%	+43.8%

† Full-time or part-time status was not indicated by 0.6 per cent of the students.

SOURCE: U.S. BUREAU OF THE CENSUS

ATTACHMENT X

AS EDUCATION HEADS INTO A 'BABY BUST', COMPETITION AND DIVERSITY WILL PREVAIL*

By Peter F. Drucker

The biggest "INFRASTRUCTURE" challenge for this country in the next decade is not the billions needed for railroads, highways, and energy. It is the American school system, from kindergarten through the Ph.D. program and the postgraduate education of adults. And it requires something far scarcer than money--thinking and risk taking.

The challenge is not one of expansion. On the contrary, the explosive growth in enrollment over the last 30 years has come to an end. By 1978, more than 93 per cent of young people entering the labor force had at least an eighth-grade education. So even if the birthrate should rise somewhat, little expansion is possible for elementary and junior-high-school enrollments. Graduate and professional schools are still flush with the last age cohorts of the "baby boom" years. But by 1985 these students will have been succeeded by the leaner age groups of the "baby bust" that began in 1960. It's almost certain some contraction in enrollments is in store.

The last 30 years of social upheaval are also over. Busing will continue to be a highly emotional issue in a good many metropolitan areas. And there will still be efforts in schools to bring women into fields such as engineering that have traditionally been considered "male." But this shift has already been accomplished in many fields: Half or more of the accounting students in graduate schools of business, for example, are now women. As for most other social issues, the country will no longer try to use schools to bring about social reform and reconstruction. It's becoming increasingly clear to policymakers that schools cannot solve all the problems of the larger community.

Instead, the battle cry for the 1980's and 90's will be the demand for performance and accountability. For 30 years, employers have been hiring graduates for their degrees rather than their capabilities; employment, pay, and often even promotion have depended on one's diploma. Now many major employers are beginning to demand more than the completion of school. Some of the major banks, for example, are studying the possibility of entrance examinations that would test the knowledge and abilities of graduates applying for jobs as management trainees.

Students and parents, too, will demand greater accountability from schools, on all levels. Indeed, with teaching jobs remaining scarce, the customers of education--parents, students, school boards--will have the upper hand no matter how militantly teachers unionize. It will be increasingly common to bring lawsuits against school districts and colleges for awarding degrees without imparting the skills that presumably go along with them. And many young people are already switching to practical "hard" subjects. Paying no heed to the incantations of "youth culture" and the media, they have been shifting from psychology into medicine, from sociology into accounting, and from black studies into computer programming.

Demand for education is actually going up, not down. What is going down, and fairly fast, is demand for traditional education in traditional schools.

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AS EDUCATION HEADS INTO A 'BABY BUST',
COMPETITION AND DIVERSITY WILL PREVAIL (CONTINUED)

Indeed, the fastest-growing industry in America today may be the continuing professional education of highly schooled midcareer adults. Much of it takes place outside the education establishment--through companies, hospitals, and government bureaus that run courses for managerial and professional employees; or through management associations and trade associations. Meanwhile, any number of private entrepreneurs are organizing seminars and courses, producing training films and audiotapes, and otherwise taking advantage of growth opportunities that university faculties shy away from.

The demand for continuing education does not take the form that most observers, including this writer, originally expected--namely, "Great Books" classes for adults wanting to learn about the humanities, the arts, the "life of the mind." We face instead an all but insatiable demand for advanced *professional* education: in engineering and medicine, in accounting and journalism, in law, and in administration and management.

Yet the mature adults who come back for such studies also demand what teachers of professional subjects are so rarely able to supply: a humanistic perspective that can integrate advanced professional and technical knowledge into a broader universe of experience and learning. Since these new students also need unconventional hours--evenings, weekends, or high-intensity courses that cram a semester's work into two weeks--their demands for learning pose a vague but real threat to academe. Academe's standard response--producing new Ph.D.'s for a new "department"--is roughly comparable to restyling the buggy whip for leadership in the new market for "horseless carriages."

The greatest challenge to educators is likely to come from our new opportunities for diversity. We now have the chance to apply the basic findings of psychological, developmental, and educational research over the last 100 years; namely, that no one educational method fits all children.

Almost all youngsters--and apparently oldsters as well--are capable of attaining the same standards within a reasonable period of time. All but a few babies, for instance, learn to walk by the age of two and to talk by the age of three. But no two get there quite the same way, as parents have known for eons.

So, too, at higher levels. Some children learn best by rote, in structured environments with high certainty and strict discipline. Others thrive in the less structured, "permissive" atmosphere of a "progressive" school. Some adults learn out of books, some learn by doing, some learn best by listening. Some students need prescribed daily doses of information; others need challenge, the "broad picture," and a high degree or responsibility for the design of their own work. But for too long, educators have insisted that there is one best way to teach and learn, even though they have disagreed about what that way is.

A century ago, the greatest majority of Americans lived in communities so small that only one one-room schoolhouse was within walking distance of small children. Then there had to be one right method for everybody to learn.

AS EDUCATION HEADS INTO A 'BABY BUST', COMPETITION AND DIVERSITY WILL PREVAIL (CONTINUED)

Today, the great majority of schoolchildren in the U.S. (and all developed countries) live in metropolitan areas with such density that there can easily be three or four elementary schools--as well as junior-high and even high schools--within each child's walking or bicycling distance. There will therefore be increasing demand for some kind of voucher system enabling students and parents to choose between alternate routes to learning offered by competing schools.

Indeed, competition and choice are already beginning to infiltrate the school system. Fundamentalist and evangelical schools and colleges have shown an amazing ability to prosper during a period of rising costs and dropping enrollments elsewhere. All this is anathema, of course, to the public-school establishment.

But economics, student needs, and our new understanding of how people learn are bound to break the traditional education monopoly just as trucks and airplanes broke the monopoly of the railroads, and computers and "chips" are breaking the telephone monopoly.

In the next 10 or 15 years, we will almost certainly see strong pressures to make schools responsible for thinking through what kind of learning methods are appropriate for each child. We will almost certainly see tremendous pressure, from parents and students alike, for result-focused education and for accountability in meeting objectives set for individual students. The continuing professional education of highly educated midcareer adults will become a third tier in addition to undergraduate and professional or graduate work. Above all, attention will shift back to schools and education as the central capital investment and infrastructure of a "knowledge society."